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ABSTRACT

This report addresses the following issues: (1) differences in social and economic attainment of blacks and whites with similar backgrounds; (2) differences in resources available for education of black and white children; (3) the effect of programmatic emphasis on the use of educational resources; (4) the effects of financial and programmatic changes on educational experiences of blacks and whites; (5) the role of changes in the educational process in achievement, school retention and advancement, postsecondary access and attainment, occupation, and income; (6) the effectiveness of government programs in reducing the disparities between black and white education. Numerous charts and tables relating to minority education over the past 18 years are presented and analyzed. (Author/WI)

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MINORITY EDUCATION 1960 - 1978:

GROUNDS, GAINS, AND GAPS

VOLUME I

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Responsibility (and credit) for report preparation must be assigned to several members of the ML-GROUP. Annegret Harnischfeger and David E. Wiley were primarily responsible for the project and for writing Chapters, 1, 2, 3, and 6. They also aided in the conceptualization and writing of Chapter 4, but primarily responsibility rested with Kathryn S. Rogers and extensive revision and editing were performed by Marjorie L. DeVault. Chapter 5 has different authors for its sections: Sections 5.1 and 5.5 were written by David E. Wiley; Sections 5.2 and 5.4 by William J. Fowler, Jr. and David E. Wiley; Section 5.6 was written by Nancy J. Peters and Edward H. Haertel; Edward H. Haertel was also responsible for Section 5.7. Final report reproduction was the responsibility of Particia E. Bland, Mary J. Dodge, and Bonita M. Riggens.

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1. Statement of the Problem

The empirical study that benchmarked current national education issues, particularly ones concerning minority pupils and those from low socio-economic-status homes, was the report on Equality of Educational Opportunity of 1966 (Coleman et al., 1966). The major policy issues of that study were pinpointed in the report's preface by Harold Howe, then Commissioner of Education. The study focussed on:

- "The extent to which racial and ethnic groups are segregated from one another in the public schools."
- "whether schools offer equal educational opportunities. . . "
- "how much the(se) students learn. . . ", and
- "possible relationships between students' achievement. . . and the kinds of schools they attend. . . "

These basic issues, although they have been deepened and expanded beyond their early specification by further conceptual and empirical efforts, remain the grounds for further work and for this study specifically.

2. Objectives

This study attempted to synthesize information bearing upon the quality of educational opportunities available to minority children over the past twenty years. Has the gap in educational services and achievement between minority and White pupils decreased? How are such changes related to the social backgrounds of these pupils? Is there evidence of effects of federal programs on pupils' learning opportunity and achievement? And what are the policy implications for education?

3. Methodology

The information and data that we have analyzed and synthesized in order to answer these questions is naturally sketchy, and varies in strength of evidence. For example, very little general knowledge exists about preschool programs and findings about preschool effects are contradictary; within elementary and secondary education, we could draw on several national achievement data bases, but information on the process of schooling, especially on resource use and educational services provided, is meager. Nevertheless, we believe that the information that we could bring together in this study elucidates the educational efforts and accomplishments of the past two decades.

More specifically, the collection of nationally representative, comparable data bearing on the educational opportunities of minorities is difficult, especially if the time span to be accounted extends to years before the mid- and late sixties. This problem exists because to be appropriately compared, data must be;

- compatably measured, i.e., obtained in ways which result in quantities which are similarly defined and which have the same units of measurement (e.g., dollars, time duration, physical or personnel resources per pupil, etc.);
- refer to specific populations defined in consistent fashion (e.g., all U.S. 4th graders, Southern Black seven year olds, etc.).

The second requirement guided our initial activities in selecting reports and data bases for scrutiny and led to primary focus on nationally representative studies. The measurement requirement was accomplished by techniques involving

-- the merger of questionnaire response categories;

-- the interpolation between category boundaries for scalable characteristics;

-- conversion of existing scores to common scales, e.g., test scores.

After appropriate data bases were selected, and measurements were transformed, trend and present status assessments were made; comparisons between White and minority pupils were the primary focus in these assessments. Opportunity-related characteristics in the areas of resources, process, context and outcomes were analyzed by level of education (pre-elementary, elementary, and secondary). An attempt was made to differentiate these characteristics not only by racial/ethnic group but also by SES and home background, geographical location and type of community. The primary sources of data for the assessments were nationally representative studies (e.g., Project Talent, the Equality of Educational Opportunity Survey, the Anchor Test Study, the National Longitudinal Study of the High School Class of 1972, the National Assessment of Educational Progress, the Sustaining Effects Study), as well as data from the Census, from ELSEGIS and the Current Population Survey. The only departures from this focus were related to desegregation and specific federal program policies for which no nationally representative data are currently available.

4. Major Findings and Recommendations

The massive Black migration from the South to Northern urban areas had practically ceased by 1965. Presently (1975), 53 percent of the Black population resides in the South. However, only one-fourth of the nation's Blacks (26%, 1974) live in rural areas and more than a fourth (27%, 1974) reside in the nation's very large cities (over 1 million population). Thus, three out of four Blacks (76%) live in metropolitan areas. This also holds for Black children. However, the percentage of Black as compared to all children in a city rises dramatically with city size, reaching 96.7% in Washington, D.C. (1974).

These high concentrations of Black pupils in large cities are a consequence of Black in-migration, birth differentials between Blacks and Whites, and White out-migration. In general, White out-migration had the strongest effect on racial isolation, followed by birth differentials and Black in-migration. Differential birth rates for Blacks and Whites will continue to account for considerable increases in the proportion of minority population. Between 1970 and 1976 the percentage of Black 5- to 14-year-olds as compared to all 5- to 14-year-olds rose from 13.6 to 14.9 percent. Although fertility levels for Black women are falling at the same rate as White women, fertility rates for Blacks are still higher, as they began at a higher level. Thus, the fact that Black children have increasingly become a racially isolated city student body demands serious consideration in the assessment of quality of education for minorities. The nation's central cities are faced simultaneously with declining enrollments and increasing proportions of Black pupils.

We can characterize the living environment of a Black child as typically being a city (53% in 1976) while a White child typically lives in a suburb (44%). Black pupils in large cities find themselves increasingly racially isolated. But racial isolation is only a facet of the socializing and learning conditions they encounter. The other is poverty. Black poor families reside either in rural areas (33% in 1976) almost exclusively in the South, or in central cities (54%). The poorest still are the female-

headed Black families, the percentage of which increased from 21 in 1955 to 35 percent in 1975, while remaining fairly constant for Whites. Two-thirds of children living in female-headed Black families were in poverty in 1974 as compared to 43 percent of such White children. Nationwide, about 11 percent of children under 18 years old lived in poverty during 1967 and 1975, however, over forty percent of Black children lived under poverty conditions. And although, in general, the gap between Black and White family income diminished between 1959 and about 1967, it has remained constant since with Black family income at about 60 percent of White. It seems that only recently has the gap closed somewhat more. However, this is mostly due to Blacks with higher educational attainment. The poor, a very high percentage of whom are Black, are becoming poorer, and this trend holds for poor White families as well. Thus central city schools are not only becoming racially more isolated, but it seems that, on the whole, they are suffering from increasing social class isolation. Large numbers of the pupil population of public central city schools live in low-income families; their parents have relatively little education and work in occupations with low status. This is, irrespective of racial and ethnic characteristics, the disadvantaged population.

This requires a basic reconsideration of desegregation. The root of the problem is social-class segregated housing, which determines to a large extent the quality of education, because it severely determines school district resources and pupil composition in schools and districts. Another factor homogenizing pupil composition in public schools is the availability of private schools. However, the picture has to be differentiated for the three levels of schooling: preschool, elementary and secondary school.

4.1 Preschool Education

Preschool education, or more precisely pre-kindergarten education, has traditionally been in the private sector. Prior to 1964, i.e., prior to Head Start, virtually no federal money was being expended on educational services or programs for such young children. Although the scene has changed since the midsixties, the typical preschool setting is still a private school, and we estimate that parents with preschool children in private schools spend more than $1.2 billion per year, which is about twice the total amount spent by the federal government on preschool services in 1977.

The major federal program serving preschool children is Head Start, although Head Start serves less children than ESEA Title I (in 1977, Head Start 349,000, Title I-A 367,000). But Title I funds are supplementary, while Head Start pays the full cost of children's preschool education. This is reflected in the cost per child which for Head Start is over three times the amount for Title I (in 1977, Head Start $1,283; Title I $371).

Head Start has never been a fully funded program, i.e., there are many more eligible children than children served. If we compare the Head Start budget obligations to federal funds at the elementary and secondary levels (ESEA Title I) and in higher education, then preschool education is treated like Cinderalla by the federal government. Since 1967 and up to 1977, funds have increased little, if we compare them to federal expenditures at other educational levels. The number of children served has decreased, and this during a time in which the percent of private preschool enrollment has tripled. The enrollment increase in private preschools indicates a growing interest of parents in preschool education. The federal government has not responded to this with funding increases which would open more preschool opportunities to children from poor families. Some states, especially California, and New York, have, however, instituted and/or expanded public pre-kindergarten educations.

Head Start is intended to serve the poor and disadvantaged. Funds are distributed to Head Start centers all over the country. This center funding has resulted in strict social-class and considerable racial segregation. Social-class segregation, because of the eligibility criterion (poverty) and racial segregation, because large numbers of

the poor are Black. This, together with housing segregation, is responsible for the fact that Head Start and other public pre-kindergarten programs have increasingly been serving minority children, especially children with unemployed parents, while White children, especially children from white-collar families, have increasingly been enrolled in private tuition-based programs. Thus, as more public and private opportunities for preschool, i.e., pre-kindergarten, become available, racial segregation unfolds.

Black preschool enrollment of 3- and 4-year-olds has become increasingly social class differentiated. Between 1970 and 1975, enrollment rates for Black children in households headed by either high school dropouts or college graduates increased more than 150 percent, while the rates of children of high school graduates increased by only 11 percent. Clearly, the dual system of publicly-supported education based on low income eligibility and tuition-based private preschool education is increasingly creating social-class segregation among Black children and limiting educational opportunity in the lower middle class.

This pattern does not hold for kindergarten education. Although kindergarten, like preschool education, is not mandatory in any state, most states require kindergarten offerings or make offerings voluntary. I.e., kindergarten enrollees are supported like elementary school children by public funds. As a consequence, 5-year-olds have uniformly high enrollment rates and the public/private school situation as well as the racial and social-class composition of students is similar to that in elementary school, especially as kindergarten usually is physically a part of elementary schools.

Five-year-old minority and White children are enrolled in kindergarten at about the same rate (81.4% with an additional 10.6% in elementary school). This, however, is a relatively recent accomplishment. Up to the late sixties, Black children used to have considerably lower enrollment rates than Whites. This enrollment differential was a consequence of differences in opportunity. Many Southern states did not offer kindergarten, and, as most of the Black children resided in the South, Blacks were deprived of kindergarten education to a higher extent. Presently, Mississippi is the only state not offering kindergarten in the public schools.

While kindergarten is typically a half-day program, although full-day programs are increasing, pre-kindergarten programs tend to be full-day when public, and half-day when private. This implies that large numbers of Black 3- and 4-year-olds attend full-day preschool programs and drop to a half-day kindergarten program when they are five years old. This pattern of school offering seems obsolete, especially with the increasing work participation of mothers (54% of Black and White mothers). The differential program length of public and private preschools also implies that Black children receive more schooling than White children.

Has this substantial increase in school enrollment and quantity of schooling decreased the performance gap between Black and White children at elementary school entry? Although direct evidence is unavailable, recent analyses of preschool programs have demonstrated positive impacts, and long-term advantages in test-performance. If such programs have greater effects on disadvantaged children, then Black-White gaps in school readiness may have decreased.

4.2 Elementary and Secondary Education

If preschool education has positive effects on student performance, then elementary school teachers should have an easier start. Actually, school entrance skills have increased, in general. But teachers, schools, and districts face extremely different situations depending on where in the country they are and on the composition of their student bodies. Also the general "headstart" in skills that first graders have

recently acquired is progressively lost. Beginning with grade 5, achievement test scores have been declining for the past decade and the decline is larger the higher the grade level. Does that mean that elementary and secondary schools not only are unable to profitably build on preschool education, but instead have fallen behind, compared to the early sixties? At that time there was less preschooling, but achievement scores of upper elementary and secondary pupils were higher. What has been the effect of the federal funding programs, most of which are directed towards educationally disadvantaged pupils?

Resources. There are eight federal education programs that serve minority pupils -- enrolled in elementary and secondary schools -- to a greater degree than their representation in the population. Although Congress did not specifically draft legislation solely to aid any given minority group, the specification that funding be directed toward children from low-income families or with non-English-speaking backgrounds, and toward school districts with racially isolated pupils, has resulted in proportionately more resources flowing to minority pupils. In 1978 alone, these programs had appropriations of almost 4.6 billion dollars and if Labor Department and other programs administered outside of the Office of Education were added, the total would be far higher.

These resources have increased substantially since the mid-sixties, although in recent years the levels of increase have not greatly exceeded the rate of inflation for any funding program and have fallen short of that rate for most. Funds for compensatory education constitute a major share of federal aid for elementary and secondary education. Although Congress, through the National Institute of Education, has spent 15 million dollars on research that would inform about crucial aspects of allocation, use, and effects of these funds, it is still extremely difficult to compose a picture of "quality of education." However, some cornerstones, which might turn out to be stumbling blocks, can be spread over the scene.

In assessing what the federal resources spent on elementary and secondary education have been purchasing, we again have to draw attention to the changing conditions that schools and districts encounter. While enrollment has been declining since 1968/69 and the declines now (1978/79) have reached eleventh grade, the percent minority in the student population has been increasing because of differential birth rates for non-Whites and Whites. And, as indicated earlier, these mostly Black, minority pupils are concentrated in large cities, and in the South. The school districts of the twenty largest cities enroll one-third of the nation's Black pupils in grades 1 through 12. Poverty in these disctricts is also high, as it is in the South in general, where the majority of Blacks reside.

If we consider districts located in the South, and central city districts, the neediest, are these districts receiving a major portion of federal money? Yes, they now do. While in the late sixties federal funds were mostly going to high poverty districts, with Whites constituting the majority of pupils, since then federal funds have increasingly gone to districts with high percentages of Black pupils, i.e., to the South and the central cities. We find, especially, if we include federal money for vocational education, which to a high extent goes to Black students, that federal educational programs concentrate on the education of Black pupils.

But what share is the federal contribution to districts' total expenditures on elementary and secondary education? Astoundingly small and becoming smaller. In general, federal aid was, in the 1967/68 school year, contributing 8.8 percent to local school budgets. In 1975/76 federal aid was only 8.0 percent of total school district revenue. During the same period, the proportion contributed by state

revenue increased from 38.5 to 43.7 percent. This indicates that local districts always had to raise most of the revenue for education, but that their burden only slightly decreased between 1967/68 and 1975/76 (52.7% to 48.4%).

But local revenues have shown increasing dispartites nationally, a great concern for the school finance reform movement. As poor and Black chaildren tend to be located in the less wealthy central city and rural districts, it is apparent that local revenues flow to White pupils out of proportion to their population representation. As these revenues consitute the majority of school resources and as they have become more unequal over time, it is apparent that the Black-White resource gap has increased.

Enrollment and Grade Retention. For the past ten years, Black children have enrolled in school to the same extent as Whites. Proportionately, in 1966, about 2.6 times as many 10 to 13 year old Blacks were not enrolled as Whites (1.8 percent vs. 0.7 percent). This ratio dropped to 1.6 in 1967 and has been about 1.0 since that time.

Black children begin elementary school earlier than Whites. In 1969 about 11.2 percent of Black 6 year olds were already beyond first grade and only 5.9 percent were not yet enrolled or in preelementary schooling. The corresponding 1969 figures for Whites were 8.7 percent and 6.3 percent respectively. This entry discrepancy has continued through 1976.

The difference in age/grade relation between Blacks and Whites changes systematically as children become older. As the children progress through the system, Blacks steadily lose their advantage drawing even with Whites at about age 9 (1969) or 10 (1976) and then dropping behind. By age 16, median grade placement for Blacks is about 30 percent of a grade lower than that for Whites.

Why does this systematic retardation occur? One obvious explanation is that Black children are more frequently retained in the same grade for more than one year. This is, in fact, the case. However, there has been a trend toward automatic promotion for both White and non-White pupils, which reduced the gap in retention rates between 1960 and 1970. Although this trend continued into the 1970's, there has been no further reduction, retention for non-Whites being about twice that for Whites.

Elementary Education

Quantity of Schooling. In general, White pupils are offered more days of schooling per year than Blacks. Hispanic pupils, however, have, on the average, an even shorter school year than Blacks. This finding is due to concentration of pupils from minority groups in certain locations in the country. Hispanics also tend to have the shortest school day, while Blacks, on the average, are offered longer school days in grades 2 to 6 (and kindergarten) than Whites who typically have slightly longer school days in grades 1, 7, and 8. However, the greater quantity of schooling offered Blacks and their lower rate of attendance offset one another, so that Blacks and Whites are exposed to essentially equal amounts of schooling in grades 2 to 6, though Whites are exposed to more in grade 1 and Blacks to more in kindergarten. Hispanics are offered least instruction and have the lowest attendance rates.

Compensatory Education. In 1976, about 87 percent of all public elementary schools were receiving some combination of federal, state, and local compensatory education monies. This funding affects traditional classrooms in several ways: class sizes are reduced; aides are added, reducing the child-adult ratio; students may be seen outside their classrooms by special teachers ("pull-out" programs). Funds are primarily concentrated in basic skill areas (reading, mathematics). Between 20 and 25 percent of instructional time of students designated to receive compensatory

education was devoted to such compensatory services. Due mainly to "pull-out" programs, compensatory education services resulted in lowered class sizes for both compensatory and non-compensatory education students. We can thus assume that ESEA Title I funds were also benefiting pupils not designated for such services. And funds are clearly reaching pupils considered disadvantaged. For each racial/ethnic group, the percentage of students selected is higher among poor students.

In Fall 1976, 44 percent of Hispanic, 35 percent of Black and 21 percent of White pupils were selected for some type of compensatory education. But the minority selection rates vary considerably by source of funds. Although about 50 percent more pupils were selected for Title I programs than for CE activities not supported by Title I, proportionately over 200 percent more Black pupils were selected for Title I and only 18 percent more White pupils. Hispanics were selected at about the same rates for both types of program. This resulted in a considerable difference in racial/ethnic composition of these programs: Title I children are 25 percent Black while other compensatory programs are only 12 percent Black.

Instructional Exposure and Setting. Pupils generally are offered more instruction than they attend. The amount of reading instruction offered to Whites declines steadily from first (332 hours per year) to sixth grade (173 hours). In the first grade, minority pupils are offered less reading instruction (-9% for Blacks, -19% for Hispanics) but by the second grade Blacks are offered relatively more instruction and by the sixth grade their offerings exceed those of White pupils by 17 percent. Hispanics are offered more reading instruction than Whites by third grade and by sixth grade the differential has reached 45 percent. The latter probably reflects increased focus on English proficiency.

All racial/ethnic groups are offered less mathematics than reading instruction. For Whites, mathematics offerings drop slightly with grade level, from 176 to 162 hours per year. Black pupils begin school with 4 percent more offered math instruction than Whites, but the amounts first rise slightly and then fall back to about the initial level by sixth grade where they exceed White offerings by 12 percent. Hispanic offerings start lower than Whites (-8%) but rise steadily, exceeding those of Whites by 16 percent in sixth grade.

Although attendance rates for minority groups are lower than those for majority pupils, the differences are small enough that patterns of actual exposure to instruction are similar to offerings. Figures for 1965 (EEOS) and 1972 (Anchor) demonstrate the change in class size for minorities. In 1965, White students attended classes of 29 students, on the average; Blacks attended classes of 32, and Hispanics attended classes averaging 31-33 students. Minority students were enrolled in classes 10% larger than those of Whites. By 1972, class size was 29.6 for both Blacks and Hispanics, only 3% larger than the 28.9 students in classes attended by Whites. This change reflects at least part of the impact of Compensatory Education funding on elementary schools.

For 1976/77 available figures are not directly comparable with earlier ones. However, the available evidence points to slightly smaller effective class sizes for minorities in the early elementary grades and substantially smaller ones by the sixth grade. Individualized (tutorial) instruction is more extensive for majority pupils in the first grade, but this pattern is reversed by grade six. It is important to note, however, that this time pattern is almost precisely paralleled by that for unsupervised learning experineces (seatwork), reflecting the fact that teachers have only limited time and when they devote it to tutoring some pupils, others remain unsupervised.

The amount of instruction received from a teacher other than the classroom teacher (pullout or other specialist) varies considerably. Instruction of this kind in

reading averages between 96 hours (first grade) and 107 hours per year (sixth grade). Overall, there is much less instruction by specialist teachers in mathematics (20 hours). In both reading and mathematics, and at all grade levels, Hispanic students spend the most time in instruction with a non-regular teacher; Whites spend the least. However, for Blacks the differential is not great for reading, but is substantial for mathematics and increases with grade level, reaching more than a 2 to 1 ratio by sixth grade.

Achievement. Between 1972 and 1976, the Black/White achievement gaps in vocabulary and reading comprehension at the upper elementary level decreased by 9 to 13 percent. Between 1965 and 1972 Black/White gaps in these areas may have increased, but alternative explanations of observed increases are possible. The Hispanic/White achievement gaps in these areas have shown a different pattern. Between 1965 and 1972, Hispanic/White gaps fell roughly 23 percent in sixth grade vocabulary and reading comprehension, but these gaps increased again by roughly 8 percent between 1972 and 1976. In mathematics achievement, limited data suggest that the Black/White achievement gap fell roughly 4 percent and the Hispanic/White fell roughly 8 percent between 1965 and 1976. Thus, although achievement test scores for upper elementary grades dropped, in general, during this time period, on the whole, the achievement differential between minority and White pupils in elementary school decreased.

Secondary Education

Schooling. To assess Black/White differences in secondary school process we examined the nature of coursetaking, the subject areas of enrollment, the type of track, the degree of homework required and completed, the class sizes, and the hours of instruction offered. In 1960, sizeable differentials in these measures were observed. Between 1960 and 1965 it appears that considerable closure took place, and by 1972, gaps in hours of instruction offered (though not attended), as well as time spent on homework and general categories of courses taken, all achieved parity or favored Blacks, whereas previously Whites had been receiving preferential treatment. However, class sizes for Blacks never reached parity with Whites -- in fact the gap remains constant -- and Whites as compared to minorities are still over-represented in college preparatory tracks -- although the descrepancy in assignment rate dropped 26 percent between 1960 and 1972. Hispanic students, in general, seem to be worse off then Black students. Blacks predominate in vocational/technical tracks. To the extent that parity in hours of instruction offered, time spent on homework, and types of courses taken are reflective of the quality of educational process, we can conclude that the racial gap in quality of secondary education has narrowed, but parity has not been achieved as indicated by contunuing discrepancies in curricular track assignment and class size.

Achievement. Between 1960 and 1965, Black/White achievement gaps declined roughly 20 percent in reading comprehension, and 5 to 15 percent in vocabulary, "abstract reasoning," mathematical reasoning, and science, social studies, and humanities and arts information. On tests of practical arts, the Black/White gap declined roughly 17 percent for males and increased roughly 17 percent for females during the same period. Hispanic/White gaps increased dramatically between 1960 and 1965, especially in reading comprehension and vocabulary, where increases were on the order of 60 percent and 45 percent, respectively. Similar changes were observed on the five information tests, where Hispanic/White gaps increased from roughly 20 to 100 percent over the same period. An increase of roughly 30 percent was found for "abstract reasoning," and no change was noted in the Hispanic/White gap in mathematics. With the exception of the tests of practical arts for males, all tests showed smaller Hispanic/White gaps than Black/White gaps. Typically, Hispanic/White gaps were 50 to 75 percent as large as Black/White gaps in 1960, and roughly 80 percent as large in 1965. It seems that there was little change in minority-White gaps between 1965 and 1975 in the areas of reading, vocabulary, mathematics and science, as all groups' scores declined.

4.3 Consequences of Schooling

In 1950, Blacks were completing only a median of 8.6 years of education. An astounding 80.4 percent dropped out of high school, and only 19.6 percent graduated. By 1977, Blacks completed a median of 12.6 years of schooling (vs. 12.9 for all persons), the dropout rate had been reduced to 25.6 percent, and the percentage of high school graduates had increased to 74.4 percent. Although these percentages are not yet at the level of all persons (14.6% dropout rate, 85.4% high school graduation rate), they reflect dramatic change. In 1977, a Black 25 to 29 years old was 87 percent as likely as a person in that age range generally to have graduated from high school.

Further, examining college enrollment of the population 18 to 19 years old, by race, in 1960 Whites were over twice as likely as Blacks (29.4 vs. 14.5%) to be enrolled in college. By 1975, the rates had increased for both groups, and Whites were only 50 percent more likely (38.1 vs. 25.3%) to be enrolled. Over almost the same period (1960 to 1976), discrepancies in Black-White graduation rates shifted from a ratio of five to one to a ratio of only three to one.

Some of these increases in post-secondary schooling are attributable to causes locussed in elementary-secondary education. Clearly, there are severe institutional barriers to college attendance by high school dropouts, even given the availability of high school equivalency examinations. Therefore, the increase in graduation rate for Blacks and other minorities is a substantial cause of increases in college attendance. However, this is not the only source of such increases. Higher rates of college attendance for minority students with tested abilities similar to Whites and similar enrollment discrepancies for Blacks from moderate income households, signal the enormous importance of financial aid and changed admissions policies.

Important in interpreting post-schooling outcomes are disparities within minority populations. Evidence is accumulating that social class differences in work and income are becoming greater among Blacks than Whites. Already employment rates for Black college graduates are above those for similarly educated Whites. Black-White median income ratios, once inversely related to educational level may now be reversed, indicating that the Black middle class is close to parity with Whites but that those who are poor and have little education are now even worse off, relative Whites.

4.4 On the Whole. . .

The achievement gap between minority and White pupils is narrowing, but is far from closing. The attainment of more educational parity of Blacks and Whites has also resulted in the achievement of more occupational and income parity for recent college graduates. Is that due to an increase in "quality of education" for minority students or is this result more a consequence of decreases in achievement test scores, in general?

Certainly, some educational process factors indicate an increase in "quality of education." Over the past two decades, we found important developments:

1. Preschool opportunity for 3 and 4 year old Black children has been greatly enhanced over the past ten years, especially for those from lower class families because of Head Start and Title I preschool programs, and for the growing upper middle class via tuition-based private nursery schools.
2. Since the major expansion of federal support for education in the midsixties, total federal elementary-secondary education funds affecting minority pupils have increased, but only at about the rate of inflation. Exceptions to the general trend have occured to some degree for Title I and especially for Handicapped Education. As a consequence, federal funds have decreased as a percent of total local district revenues.

3. As minorities generally are located in districts with low property values, as the preponderance of local revenues are still from local sources, and as local revenues have become increasingly disequalizing, districts with high concentrations of minorities are increasingly resource poor.

4. Blacks start out in elementary school at younger ages than Whites but fall increasingly behind until, at age 16 they average 30 percent of a grade below their White age mates.

5. In early elementary grades, minorities are offered and receive less instruction in basic skills (reading, mathematics) than Whites, but by sixth grade the amount of such instruction, by then remedial, exceeds that for Whites. 35 percent of Blacks, 44 percent of Hispanics and 21 percent of Whites receive compensatory education in elementary school, and about 60 percent of the total are supported by Title I. Title I selects, proportionately, many more Blacks than Whites for participation than other compensatory programs.

6. In 1960, there were large gaps between the secondary school services provided Blacks and Whites. By 1965, amount of instruction offered, homework, and types of courses taken had reached parity. However, Blacks still encountered larger classes by 1965 and the discrepancy in percent assigned to academic tracks closed only 26 percent between 1960 and 1972.

7. Majority-minority verbal achievement gaps in elementary school decreased about 10 percent between 1965 and 1972. The elementary mathematics gap fell about 5 percent over the same period. Black-White gaps in secondary school achievement declined in all areas between 1960 and 1965. Hispanic-White gaps increased dramatically over the same period. Little change was found in secondary achievement gaps between 1965 and 1972.

8. Minority children who were the recipients of increases in secondary school resources in the 1960's include those young adults whose additional schooling is now paying off in higher income relative to Whites. Minority children who were recipients of increases in elementary school resources in the 1960's include those high school graduates who are more likely to pursue additional education.

The total picture seems to support a conclusion of increased "quality of education" for minority students. Federal programs have assisted this effort, especially in the South and in central cities. It is important to also consider what would have happened if federal programs were not existing. The high reliance on local funds for education would have resulted in considerably higher revenue discrepancies than presently.

Although we found that federal programs contributed to the "quality of education" for minority students, there are two areas of concern where federal programs might have adverse effects. One concerns the fact that Head Start Centers are indirectly supporting segregated preschooling and the other concern is that after 25 years of desegregation, we were not able to detect clear positive effects.

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1. The Issues

Recent reports and statements by social scientists, concerning the relative social attainments of Blacks and Whites in American society, have stirred deep feelings and vocal debate. Many data and many words have been advanced to support the view that most important racial differences in life style, occupation, and income are due, not to race, but to social class.

The reports do not dispute manifest current discrepancies in overall income or educational attainment of Blacks and Whites. Instead they explain them by pointing to decreases in, e.g., income gaps for Blacks and Whites with similar educational backgrounds or to the fact that in younger age groups racial differences in educational attainments have diminished. However, these reports are supported, in public perception, by the obvious consequences of affirmative action programs. Open and preferential admissions have accelerated admission to college, university and professional schools and have precipitated legal and political controversy. And those Black individuals who have the educational attainments which permit them to enter middle class occupations, are sought out and rewarded with advancement and high salaries.

Simultaneously, there has been a middle class tax revolt. Homeowners and other middle class taxpayers, deeply worried about deteriorating government services, declining test scores, and welfare cheating, are positively agitated by extreme increases in cost of living and taxes. They see little benefit for themselves and only illegitimate benefits for others emanating from the taxes they pay.

Within the educational realm, the increasing integration of educational, with more general, political issues has intensified public debate over the schools. The continuing transfer of budgetary power over schools to state legislatures increases the influence of politicians concerned with a broader spectrum of problems and concommitantly reduces the influence of "professionals" and school boards. The continuing press of court-initiated desegregation has heightened conflict as increasing dissatisfaction with both schools and taxes forecloses the remaining options.

These developments have come to pass more than twenty years after the nation experienced the twin social shocks of Brown vs. Board of Education (1954) and Sputnik (1956). Since that time, strong efforts have been undertaken to improve the quality of education for children. Especially since the mid-sixties, focus has been drawn to minority and other children who were considered to live in educationally disadvantaged environments, i.e., who come from poor families, who often are not yet English speaking in primary grades, who are physically or mentally handicapped, or who live in migratory families. Overwhelmingly, these educationally disadvantaged children are from minority groups, especially Black and Hispanic.

Major emphasis in federal support for education of these children, which is reflected in Title I of the Elementary and Secondary Education Act of 1965, followed a dual consequence of poverty:

-- The great income segregation of school districts and the dependence of school funds mainly on the districts' property taxes, resulting in low levels of resources for districts with large numbers of poor families and causing extremely unequal opportunities for learning.

-- The low levels of family income, highly tied to little parental education, causing a poorly educative home environment for children, which in turn, depresses achievement levels.

With Head Start these efforts were extended to preschool education. And other programs of the Office of Child Development, such as Home Start and the Family Resource Program, reflect the multidimensional efforts being undertaken to overcome disadvantages.

Bilingual education programs were initiated to overcome learning problems resulting from lack of knowledge in English. Federal programs in education for the handicapped have been inaugurated to help overcome the special problems of these individuals, especially as they are increasingly integrated into regular public schools. Free lunch programs and health programs were implemented to provide basic physical prerequisites for learning. The major federal program, however, which has been specifically directed toward the whole range of educational problems of minorities, is the Emergency School Aid Act. This Act is intended to facilitate "the process of eliminating or preventing minority group isolation and improving the quality of education of all children. . . "

All of these initiatives, federal and state, have responded to the findings that pupils from low-income families and minority groups ranked below average in their educational achievements. Inequality of educational opportunity was believed to be a major cause for the below-average achievement levels of these groups. As a consequence of these efforts, multitudes of compensatory programs have been developed and implemented in education primarily focussing on basic skill areas such as reading, language arts and mathematics. Early intervention programs, also initiated for compensatory and preventive purposes, heavily focus on cognitive but likewise on social-compentency skills.

But the efficacy of these programs in meeting their goals has been repeatedly challenged. Beginning with the report of the Equality of Educational Opportunity Survey in 1966, educational surveys have found little or no effect of educational resources and programs on educational achievement. And evaluations of early intervention programs have reported meager or no long-term gains. Achievement test scores which had risen steadily until the mid-sixties, have been declining ever since. There is cumulating evidence that even while capabilities for complex skills have declined, these investments have produced increases in the most basic areas of school achievement. But these declining test scores have raised serious questions concerning the quality of American education. They have coincided with large increases in educational expenditures and meanwhile enrollments have begun to decrease. Simultaneously, high unemployment and inflation, and dissatisfaction with the middle class tax burden have led many to the conclusion that the society cannot afford increasing educational investments.

Current educational discussion and debate have concentrated on resource cutbacks and on the withholding of educational credentials from low achieving pupils. Discussion has focussed not on increases in educational services to the disadvantaged, nor even on the further restructuring of their education to continue and expand increases in their skill and knowledge.

Two types of educational action, however, did eventuate:

-- A small number of - mostly suburban - districts and private schools abruptly changed their curricula "back to basics," meaning to an image of what schooling was fifteen years ago when test scores were at their peak.

-- More than thirty states have initiated legislation to install minimum competency testing at least for high school graduates and to award graduation certificates only to those who pass.

Both movements are, however, merely peripheral responses to declining achievement. After a period of large-scale cumulative development, it is a "short-circuit" to regress back to the "good old days." After an enormous decade-long effort of improving educational opportunity and reducing educational inequality, it seems that we have no harvest of effective schooling, neither organizational, structural, technological, nor curricular, but only a weed-laden field. Legislators, tired of continuing impotence in educational policy, despite their increasing financial responsibility, have thus grasped onto graduation credentialling. It seems that some of the burden is moving directly to the pupils, especially those from disadvantaged and minority groups, bypassing districts, schools, and teachers.

Laid on top of these concerns and problems is the new reality of rising costs and decreasing revenues. Is it possible, under these circumstances, to avoid the reversal of our success in increasing achievement levels for the most basic of skills? And will declines in the attainment of more advanced skills be exacerbated by these resource cutbacks?

We have special concern about resource cutbacks used to reduce the quantity of schooling. By such cuts personnel and material resources can be saved, but at the expense of pupil learning time. Our own investigations have indicated that achievements drop almost directly in proportion to losses in instructional time. Further, minorities and other educationally disadvantaged pupils suffer the most from these curtailments, as schooling has a greater relative impact on children from disadvantaged backgrounds than it does on those who have intellectual encouragement and material support in their home environment.

This coincidence of social-science supported ideological change and the increasing public support for reduction in government programs and taxes, raises serious questions concerning the future of governmental policy bearing on educational and social services for minorities. This report addresses the following questions:

1. Are the differences in social and economic attainment of Blacks and Whites small for individuals with similar backgrounds? If so, how does that affect our view of the large remaining gap between typical individuals of each race and what does this imply for government policy?

2. What are the differences in resources available for the education of Black and White children and how has this changed?

3. Has programmatic emphasis made a difference in the use of these resources?

4. What implications have financial and programmatic changes had for actual racial differences in educational experiences?

5. What role have changes in the educational process played in achievement, school retention and advancement, post-secondary access and attainment, occupation, and income?

6. And in total impact, have government programs been effective in reducing the disparities between Black and White education?

2. Changes in Population, Location, and Composition

In order to assess quality of education for minorities, we have to consider the circumstances and changes therein, under which education and schooling occur. In particular, we must attend to critical demographic changes in the racial composition of the population and the geographic location of Blacks and Whites.

Through most of this century there was an outpouring of American Blacks from the South to other areas of the United States. This massive migration slowed in the 1950's and had practically ceased by 1965. Subsequently (1975), about 55 percent of the Black population resided in the South, but recently there has been evidence of reverse migration and of concommitant relative increases in the Southern Black population.

By 1960 (Table 2.1) 68 percent of the Black population lived in metropolitan areas, primarily in the North and West. This further increased to 76 percent by 1970 and remained at that percentage in 1974. The percentage of Blacks in cities of more than one million increased from 19 to 27 percent over the latter period.

Table 2.1 Percent of Black Population Residing in the South, and in Central Cities, Suburbs, and Rural Areas, 1960 and 1970

Urbanization	1960	1970
Metropolitan	67.7	75.9
Central City	52.4	60.0
Suburb	15.3	15.9
Rural	32.3	25.7
South	59.8	53.1

Source: Statistical Abstract of the United States.

Thus currently, the U. S. Black population is primarily located in metropolitan areas - in all regions - and in the rural South. The impact of this on the educational system is profoundly exhibited in Table 2.2 There we see the 1970 distribution of the Black population, 5-17 years old, by Region and Urbanization. Thirty-five percent of Black children live in Northern and Western cities, 21 percent in Southern cities and 25 percent in Southern rural areas. Only 16 percent reside in suburbs and 2 percent in Northern and Western rural areas. Also displayed in this table are the percentages of the total child populations living in these areas who are Black. Thus, 23 percent of the children in Northern and Western cities, and 33 percent in Southern cities were Black.

Table 2.2 Geographic Distribution of Black Children, 5-17 Years Old, 1970

	Percent of Black Children Located In Area	Percent of Children In Area Who Are Black
North and West	45.0	-
Central City	35.0	23.3
Suburb	7.9	3.5
Rural Area	2.1	1.6
South	55.0	-
Central City	21.3	33.4
Suburb	8.3	12.4
Rural Area	25.4	24.5
TOTAL	100.0	-

Source: Special Tabulations of 1970 Census data, see Haertel and Wiley, 1977.

For the U. S. as a whole, in 1970, 56 percent of all Black children resided in central cities and of all children in these cities, Black children constituted 26 percent. This latter percentage rises dramatically, however, with increasing city size. Table 2.3 displays minority percentages - both for total population and school enrollment - of twenty-seven large cities.

Table 2.3 Percent Minority, Total Population and School Enrollment, in 27 Large Cities

	% Minority Pop. in Total City Population-1970	% Minority Student Enrollment - Fall, 1974
Atlanta	51.89	84.9
Baltimore	47.02	70.4
Boston	17.41	47.7
Buffalo	21.26	47.7
Chicago	34.47	72.5
Cleveland	38.99	60.6
Dade County	23.42	54.0
Dallas	25.84	55.5
Denver	10.98	45.6
Detroit	44.50	73.6
Long Beach	8.24	26.2
Los Angeles	22.81	58.0
Memphis	39.16	69.9
Milwaukee	15.57	38.4
Minneapolis	6.44	19.1
Nashville	19.91	28.1
New Orleans	45.51	80.8
New York City	23.38	65.6
Oakland	40.94	78.2
Philadelphia	34.37	66.8
Pittsburgh	20.73	43.4
Portland	7.85	15.6
St. Louis	41.34	70.4
San Diego	11.09	30.3
San Francisco	28.57	69.2
Toledo	14.25	33.6
Washington, DC	72.33	96.7

Source: Office of Technology Assessment, 1977.

These figures, do not solely represent the consequences of in-migration of Blacks. They also represent out-migration of Whites and Black-White birth differentials. Table 2.4 displays an analysis of population composition changes in nine major cities during the period between 1950 and 1970. In general, the largest contribution to population composition change during the early (1950-1960) and the later (1960-1970) decade was

Table 2.4 Components of Changes in Racial Composition of Nine Large Cities, 1950 - 1970

City	Percent Minority			Percent of Increase Due To							
				Out-migration		In-migration		Total Migration		Births	
	1950	1960	1970	1950-1960	1960-1970	1950-1960	1960-1970	1950-1960	1960-1970	1950-1960	1960-1970
New York	9.8	14.7	22.8	34.4	28.1	35.4	44.3	69.8	72.4	30.2	27.5
Philadelphia	18.3	26.7	34.1	46.8	56.3	24.9	13.7	71.7	70.0	28.3	30.0
Baltimore	23.8	35.0	46.9	49.5	50.2	22.7	14.4	72.2	64.6	27.8	35.4
Washington, DC	35.4	54.8	72.1	61.5	63.5	17.2	9.1	78.7	72.6	21.3	27.4
Detroit	16.4	29.2	44.5	55.7	59.1	25.1	22.8	80.8	81.9	19.2	18.0
Chicago	14.1	23.6	34.4	39.3	51.1	32.9	19.0	72.2	70.1	27.8	29.8
Los Angeles	10.8	16.8	22.8	-	6.4	-	56.5	67.7	62.9	32.3	37.1
St. Louis	18.0	28.8	41.3	63.4	-	15.2	-	78.6	73.1	21.4	26.9
New Orleans	32.0	37.4	45.4	43.7	-	2.6	-	46.3	62.6	53.7	37.4

Source: Office of Technology Assessment, 1977.

out-migration of Whites, followed by birth differentials, and finally minority in-migration. The only exceptions to this trend were New York and Los Angeles where in-migration continued as the most important source of change in population composition. However, between the decades generally, White out-migration clearly became the most potent cause of changes in urban minority percentages as Black migration from the South came to a stop.

Changes in birth rate have, however, profoundly affected the circumstances faced by schools. After the post-war "baby boom," fertility rates peaked for both Blacks and Whites in the late nineteen-fifties and have been declining since. (Figures 2.1 and 2.2) But all during the period of increase and decline Black rates have greatly exceeded White.

Figure 2.1

FERTILITY RATES FOR FEMALES OF BLACK AND OTHER RACES

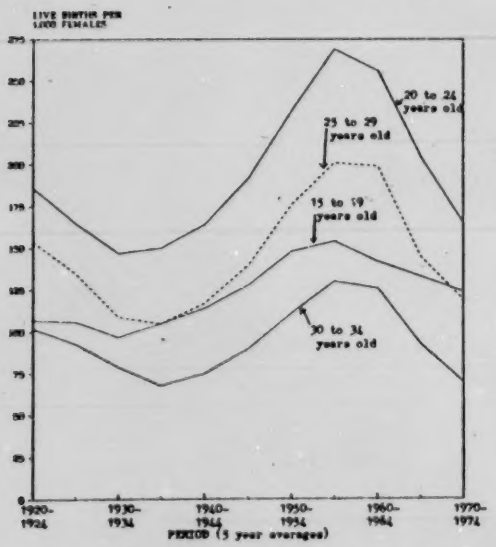
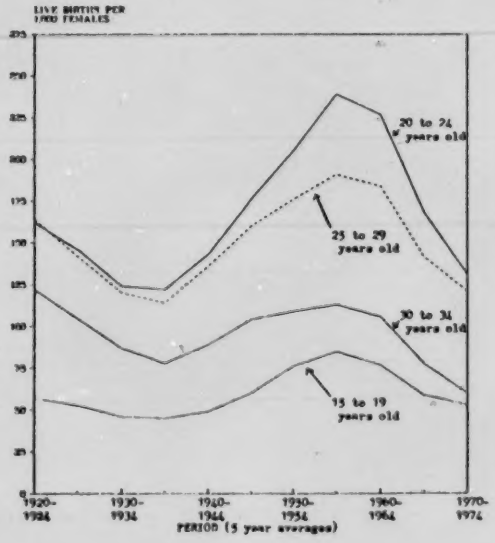


Figure 2.2

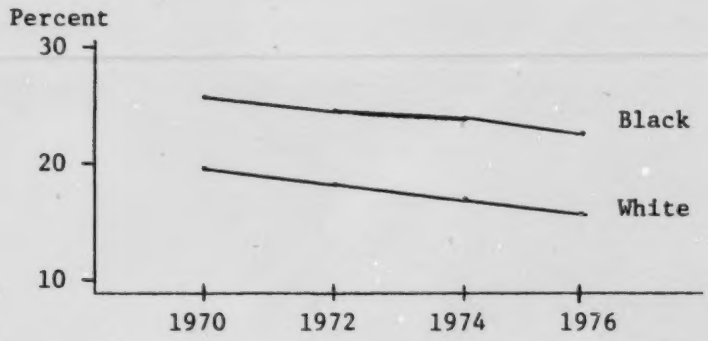
FERTILITY RATES FOR WHITE FEMALES



Source: Office of Technology Assessment, 1977.

Birth rate declines have, however, strongly interacted - especially recently - with migrational shifts, in redistributing the school population. By 1975, differences in Black and White fertility and mortality had resulted in 29.3 percent of the Black population being between 5 and 17 years old while only 22.8 percent of the White population was in this age range. Figure 2.3 displays recent changes in the proportion of children 5-14 for these populations.

Figure 2.3 Proportion of Blacks and Whites Between 5 and 14 Years Old, 1970 - 1976.



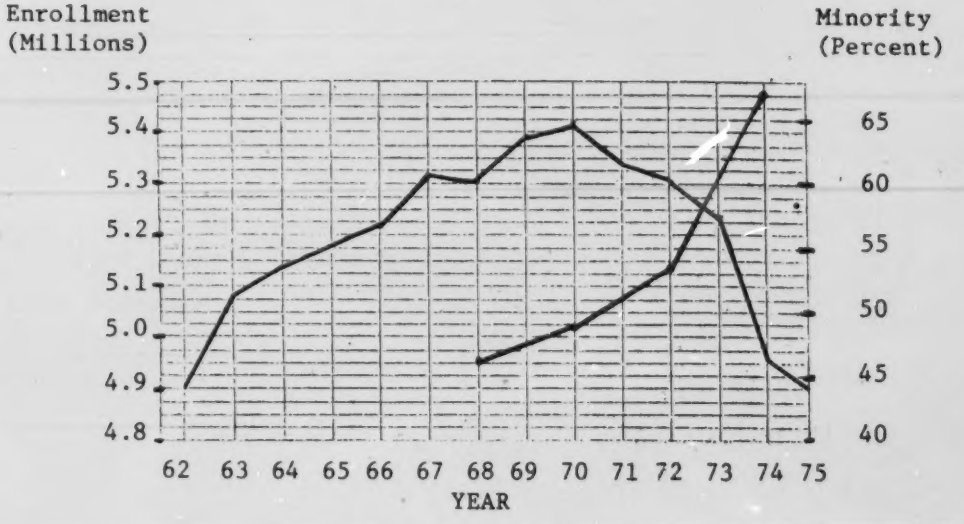
Source: Statistical Abstract of the United States

This gap is widening. In 1970, the Black percentage of 5-14 year olds was 26 percent greater than the White, in 1976 the discrepancy reached 30 percent. This implies that of all children 5-14 years old, Blacks constituted 13.6 percent in 1970 and this percentage had risen to 14.9 percent by 1976.

The total impact of these changes is profound, especially for the central cities in which the majority of black pupils are located.

The school districts in these locations are faced simultaneously with declining enrollments and increasing proportions of Black pupils (Figure 2.4).

Figure 2.4 Enrollments and Percent Minority Pupils in Twenty-Seven Largest Cities



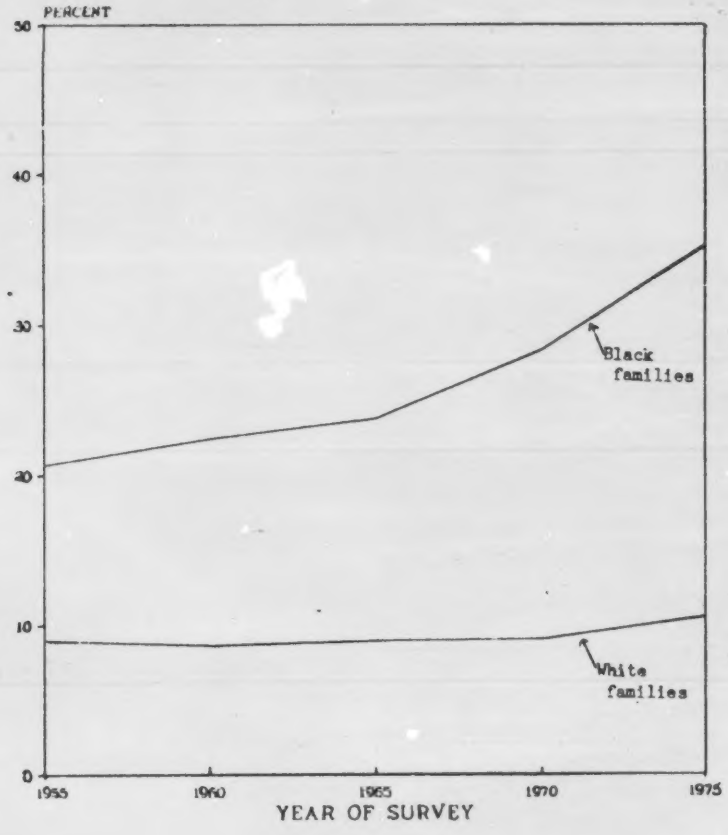
Source: Office of Technology Assessment, 1977.

3. Changes in The Family

Public attention to demographic changes in family life has focussed most directly on declines in birth rates. This important change, which is now seriously affecting American elementary and high schools, is, however, but one of a number of critical demographic and social changes affecting family life since World War II. About the time of the initial drops in recent birth rates, divorce began to increase dramatically. And this, joining a continual post-war drop in marriage rates has initiated large changes in the composition of family and other living units. Additionally, the percentages of women who are separated or widowed has also increased. And all three rates have grown most steeply for women with children and for Blacks.

Because of these factors, the Black family unit of husband and wife continued to decline during the 1970 decade. In 1975, of 5.5 million Black families, roughly 61 percent had both spouses present, which was a decline from 68 percent in 1970. The percent of Black families headed only by a woman without a spouse present has steadily increased, from 21 percent in 1955 to 35 percent by 1975 (Figure 3.1). The similar White percentage had been relatively constant to 1970 and then shifted from 9 to 11 percent. Between 1970 and 1974, the number of Black women as family head increased by one-half million (37%) a greater percent of Black female family heads were either single or divorced in 1974 than 1970. In addition, those women apparently are younger than those in previous years.

Figure 3.1 Female Headed Families as Proportion of All Families by Race: 1955 to 1975

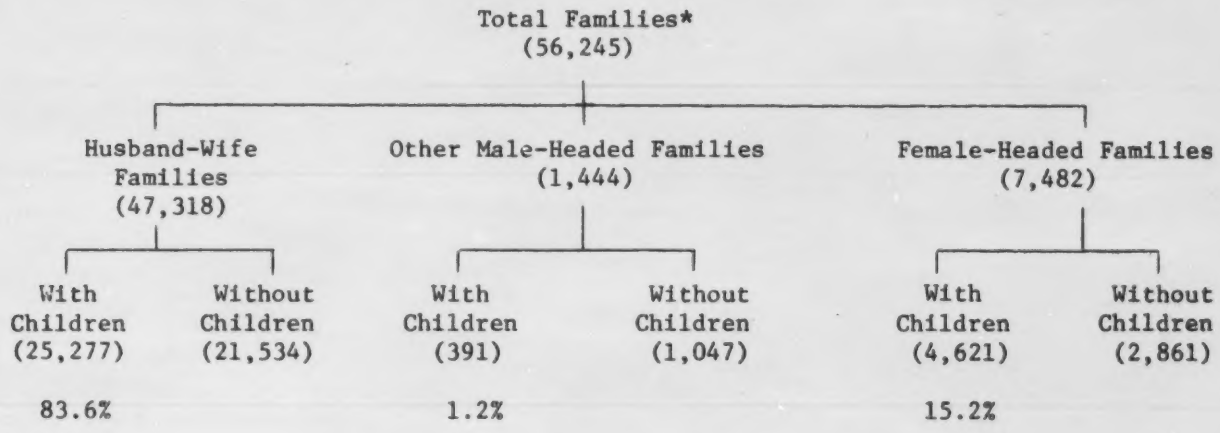


Source: Office of Technology Assessment, 1977.

Fertility levels for Black women are falling at the same rate as White women, however, since they began at a higher level, the fertility rate is still higher for Blacks than for Whites. In 1973, the rates were 2.44 per Black woman and 1.80 per White woman. Black wives expect less births than previously although because they experience births earlier than White women, their expectations may not be realized. Of Black women 30 to 34, the average number of children born dropped from 3.4 to 2.5

between 1965 and 1974. These structural changes have led to a distribution of family types considerably different than that existing immediately after World War II (Figure 3.2).

Figure 3.2 Distribution of Families by Sex of Head and Presence of Children.



* Includes secondary as well as primary families.

NOTE: Numbers in parentheses are in thousands.

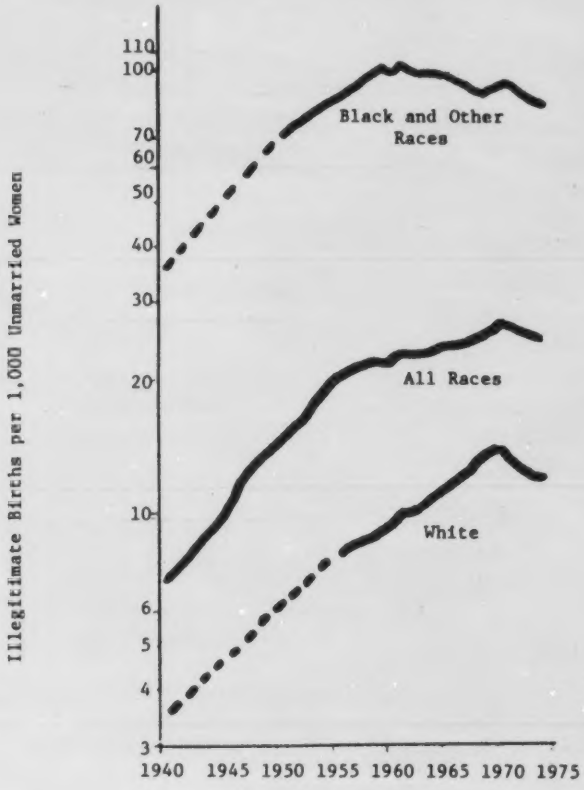
In 1976 there were 72 million households. Of these, 16.8 million involved primary individuals; that is, individuals living alone or with other non-relatives. Over 56 million households were established for families.

SOURCE: U. S. Bureau of the Census. "Household and Families, By Type: March 1976." Current Population Reports, Series P-20, No. 296, Washington, D.C.

In addition, changes in the number and rate of illegitimate births have been large. Generally, such rates have been 9 or 10 times higher for Blacks then Whites (Figure 3.3). And although all age-specific illegitimacy rates

for Blacks peaked in the mid 1960's, those for Whites of the youngest ages (15-19) have continued a steady rise and the total ratio of illegitimate to legitimate births has also continued to climb (Office of Technology Assessment, 1977).

Figure 3.3 Illegitimate Birth Rates per 1,000 Unmarried Women 15 to 44 Years Old by Race: 1940 to 1974



Data for Whites and Nonwhites are for 1940, 1950, and 1955 to 1974. The broken line indicates a discontinuous series.

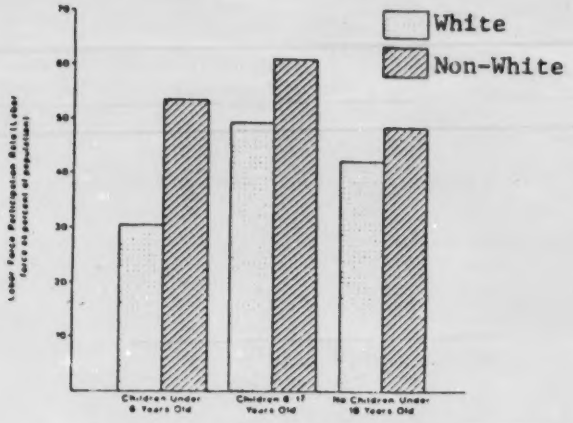
Source: Office of Technology Assessment, 1977.

All of these factors have made for considerable modifications in the numbers of children who are in various kinds of family settings. Between 1960 and

1976, for example, the percentage of all children (under 18) living with divorced parents increased from 2.1 percent to 6.8 percent, the percentage living with never-married parents from 0.3 percent to 1.8 percent and the total percentage living with single (unmarried, widowed, divorced, or separated), from 9 percent to 17 percent. In total, the increase in non-White children living in one-parent families was 68 percent compared with 35 percent for Whites (Office of Technology Assessment, 1977). The Census Bureau now estimates that of children born in 1977, 45 percent will live in single parent settings for a lengthy period before they reach 18 years of age (Norton, 1977).

The most striking additional fact about change in American families has been a phenomenal increase in labor force participation of females. From 1960 to 1976 White female participation in the labor force increased from 36.0 percent to 46.3 percent of all those 16 years and older. Participation of Black females, already high in 1960, increased only 2.5 percent from 47.2 to 49.7 over the same period. Participation of mothers has increased even more strikingly. In 1974, 54 percent of mothers of school-aged children and 37 percent of mothers with children under 6 are either working or actively seeking employment. Figure 3.4 displays the general pattern of labor force participation by number of children and race. Black mothers have uniformly higher rates and the discrepancy increases with decreasing age of children, but the evidence suggests that with each succeeding year the gap closes. This participation varies greatly with education, and, for the highest educational levels, with husbands' income.

Figure 3.4 Labor Force Participation of Married Women With Children by Race: 1973



Source: Office of Technology Assessment, 1977.

Most dramatically, the percentage of very young children whose mothers participate in the labor force has discrepant trends for Blacks and Whites. Between 1967 and 1976, the percentage of White three-and four-year-olds whose mothers were in the labor force increased from 29.5 to 39.8 percent, while the corresponding percentage of Black children increased from 49.2 to 51.6.

Generally the percentage of children affected by labor force participation of their mothers has increased most rapidly for Whites, and more specifically for White children in complete -- husband/wife -- families (Table 3.1).

Table 3.1 Percent of Children with Mothers in the Labor Force, By Family Type, Age of Child, and Race, 1970, 1976 and 1977.

Children		1970	1976	1977
Husband-Wife Families				
Under 6 years	Black	46.0	54.4	57.6
	White	25.6	33.2	34.5
6 - 17 years	Black	55.7	53.9	61.1
	White	40.7	47.2	49.3
Total Under 18 years	Black	52.7	52.7	60.1
	White	36.0	43.0	45.0
Female Headed Families				
Under 6 years	Black	38.6	43.5	40.3
	White	41.4	50.0	49.6
6 - 17 years	Black	50.9	50.0	54.3
	White	61.1	63.9	66.9
Total Under 18 years	Black	47.6	48.4	50.6
	White	56.8	60.8	63.1

Source: U. S. Senate Committee on Finance, Child Care, 1977.

Between 1970 and 1977, the percentage of Black children in husband/wife family units whose mother participated in the work force increased from 46 percent to 58 percent for children under 6, and from 56 to 61 percent for children between 6 and 17. The corresponding increases for White children were 26 to 35 percent and 41 to 49 percent. For female headed families the

increases were much smaller, but the absolute levels are high, averaging over 50 percent for both races in 1977. Trend data for Hispanics are not available, but in 1976, the percentage of Spanish origin children affected by maternal labor force participation was lower (less than 40%, Appendix B) than for either Whites or Blacks especially for children under 6 (just over 30%, Appendix B). Clearly, two of the most important factors constraining the socialization opportunities of children are that the mothers who are educationally best prepared for child rearing are likely to be working, and the most poorly educated mothers are handicapped in the extreme, by low family income.

Overall, the disparity between Black and White family income diminished from 1959 to about 1966 or 1967 and has remained constant ever since, with Black income at about 60 percent of White (Table 3.2). But this discrepancy applies to families of all types. When the family is intact, the median income in Black families was $10,365 in 1974, compared to $14,055 in the same year for Whites (a ratio of .74). Although recent evidence (Smith & Welch, 1978) indicates Black women have achieved approximate income parity with White women similarly situated, that level is still more than half that earned by men similarly situated and is misleading as an indicator of children's family environment as many more Black children are in single parent, low income settings than Whites. For Black men as a whole, the situation appears to be eroding, rather than improving, although the recent Rand Study (Smith & Welch, 1978) indicates that age- and education-specific gaps may be closing somewhat.

Table 3.2 Median Income of Families, by Race, 1959 - 1976.

Year	Black	White	Ratio Black to White
1959	3047	5893	0.52
1964	3724	6858	0.54
1965	3886	7251	0.54
1966	4507	7792	0.58
1967	4875	8234	0.59
1968	5360	8937	0.60
1969	5999	9794	0.61
1970	6279	10236	0.61
1971	6440	10672	0.60
1972	6864	11549	0.59
1973	7269	12595	0.58
1974	7808	13356	0.58
1975	8779	14268	0.615
1976	9242	15537	0.595

Source: Statistical Abstract of the United States

The total situation is especially dramatized by the differential poverty figures (Table 3.3) for Blacks and Whites. White poverty has hovered around 10 percent while Black poverty has been four times that amount. For female-headed Black households the figure has reached 66 percent.

Table 3.3 Percent of Children Under 18 Years Old in Poverty Families, By Race; 1967 to 1976.

Year	White	Black
1967	11.3	47.4
1968	10.7	43.1
1969	9.7	39.6
1970	10.5	41.5
1971	10.9	40.7
1972	10.1	42.7
1973	9.7	40.6
1974	11.0	39.6
1975	12.5	41.4

	1974	
	Male Head	Female Head
Black	21.7	65.7
White	7.1	42.6

Source: Bureau of the Census, Characteristics of the Low-Income Population, 1973; Money Income and Poverty Status of Families and Persons in the U. S., 1974, and update.

From these facts, we can validly infer that an increasing segment of the family population, consisting of young Black females heading families with small children, is now under severe stress. Table 3.4, taken from Toward a National Policy for Children and Families (NAS, 1976) amply illustrates the magnitude of this problem. The table implies that almost 20 percent of all American children are in conditions of extreme hardship.

Table 3.4 Estimated Numbers of Children (in Thousands) Under 6 By Family Income, Family Structure, and Mother's Labor Force Participation

	Family Income					
	Under $3,000	$3,000 to $5,000	$5,000 to $7,000	$7,000 to $10,000	$10,000 and over	Total by Labor Force Status and Family Structure
Parent(s) in labor force						
Single mother	293	343	273	274	324	1,507
Mother in two-parent family	116	180	309	782	4,126	5,513
Single father	12	28	16	35	68	162
Parent(s) not in labor force						
Single mother	675	460	200	73	47	1,455
Mother in two-parent family	320	581	883	1,859	6,775	10,419
In family with neither parent	71	64	49	61	149	394
Total by income level	1,487	1,656	1,730	3,084	11,489	19,450*

*This total accounts for all children under 6 except about 70,000 not living in families, most of whom are presumably in institutions.

Source: National Academy of Sciences. Toward a National Policy for Children and Families, Washington, D.C., 1976.

4. Preschool Education

A singularly important group for whom opportunities have significantly changed is the preschool population of children from three to five years of age. Over the past twenty and particularly over the past 15 years, cumulative awareness of the importance of early learning through the findings of psychologists and educators in the early 1960's combined with greater opportunities for enrollment in public (state and federal) and privately organized programs to produce consistently and dramatically increasing enrollments of children in early education programs.

The analysis of preelementary education poses special problems. Throughout this report we have attempted to focus on three aspects of educational intervention: resources, expended to produce changed outcomes; process, enrollment, and the strategies of changed, instructional techniques or services to children; and context, the factors outside direct control of schools which might affect educational opportunity within the school system.

Each of these factors is to be related as much as possible to outcomes, the impact on the student's cognitive and noncognitive development. In the case of preschool children, identifying "trends" in each of the above areas is hampered by (1) the relatively recent accumulation and publication of information on very young children (2) the wide institutional variety and dispersal of settings in

which these children are enrolled, most of which are outside public schools,[1] (3) the lack of comprehensive outcome measures of cognitive change and development immediately following the preschool "treatment" years.

These data constraints have made it necessary to focus primarily on the resources, enrollment, and context of preelementary education. In particular, resources, in addition to dollar allocations or payments, implies differential opportunity for education--especially as it results from public expenditure. Thus, much of the concepts of resources, enrollment, and context, prior to elementary school bear on:

-- who and how many are enrolled, in
-- what kind of program, available in
-- which locations.

4.1 Preschools and Their Programs

Preelementary programs are most commonly located in:

-- private nursery schools,
-- public kindergartens, and
-- Head Start and other public centers.

All three categories are diverse, but each has important commonalities.

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[1] Three and four year old children are often enrolled in programs supported by public funds, but these funds are not disbursed through the public school system, but through a variety of state and federal agencies. Therefore, accumulating comprehensive information on total resources becomes extremely difficult.

A typical nursery school program is privately operated and serves middle to upper income White, suburban children. Most programs operate half days and often less than 5 days per week.

The programmatic offerings of nursery school seem fairly commonly utilized and accepted and are almost a matter of shared folk wisdom rather than being a single imposed curriculum. Play experiences center around blocks, water, and sand play. Socialization and language development is encouraged through songs, role playing, verbal games and a certain amount of self-responsibility.

Small motor coordination and "pre-reading" skills are encouraged through art and drawing projects, sorting and ordering activities, and small manipulative tasks. Perceptual skills may be a special area of concern, where development of judgment and discrimination through use of the senses of sight, sound, texture and aroma is stressed. Large motor skills are developed through dance, movement activities, and outdoor play and are typically stressed less systematically than other skills. "Pre-math" skills are often confined to simple counting. The degree to which various programs weave these general areas into a coherent educational program varies widely; from extreme laissez faire play sessions to highly structured experiences with stated learning objectives and criteria for assessment.

Amazingly, whether programs are public or private, half-day or full-day, Montessori or behavioral, expensive or "free," their "curricula" are by and large composed of these same general areas.

Only very general statements can be made about non-instructional services in private nursery schools. Most do not provide transportation, most do not provide hot meals or health services for sick children. However, many of these characteristics are found in publicly available programs along with family counseling, at-home programs, and opportunities for job training and credentialing within the program itself.

A typical kindergarten program is public, attached to an elementary school, and attended primarily by five year old children during the school year prior to their entry into the first grade.

Many of the same areas of program focus stated for nursery school are also applicable to kindergarten. For many children, kindergarten will be their only preschool experience. However, in recent years, as more and more children have begun to enroll in preschool prior to kindergarten, the traditional kindergarten curriculum stated originally by Friedrich Froebel over 100 years ago, has undergone a subtle, but perceptible transition. Froebel's curriculum stressing the therapeutic and developmental value of play has been gradually

giving way to a curriculum of specific "preparations for school." Thus, phonics, word recognition, and simple computations are much more stressed in the kindergarten of today than they were 20 years ago. Children often are engaged in work sessions, between role play, carpentry, music, and cooking activities, where they learn simple mathematics and reading skills and complete worksheets which look identical to traditional "schoolwork."

Most kindergartens operate only half-day sessions five days per week, although the number of full day sessions has increased in recent years. Full-day sessions probably do not add many different elements to the curriculum, but simply spend more time on each.

Differences in teaching style and philosophy which sometimes dominate the debate between public and private schools seem to be less severe at the kindergarten level. Currently, most educators agree that, with fairly subtle variations, teaching of preschool children should not be expository as much as experiential, should allow for the child's freedom of movement and exploration, and should stress social and interactive skills almost as much as cognitive ones. Also, most programs are planned to account for short attention spans, choice of activities based on interest, and opportunities for large group, small group, paired, and individual experiences are usually provided.

Head Start is the only publicly supported preelementary program for which there are nationally prescribed operational guidelines. Hence, it is the only federal program about which we can make general statements. The administration of Head Start is highly decentralized. Agencies in over 1,200 communities administer programs according to general Head Start guidelines, but enormous latitude and flexibility are built in. For example, not all models must be center-based. Cultural needs of a neighborhood allow providers to adapt to a less than five day per week program as long as comprehensive services (meaning health, education, nutrition, and family support) are still provided.

Each published evaluation of Head Start, and later of the Head Start Planned Variations, Follow Through, has emphasized cognitive development and achievement of academic skills as the major desired outcomes. However, so much latitude is allowed in planning and implementing the educational components that it is unlikely that they uniformly aim at achieving clear and articulated cognitive changes in children. Four suggested general educational models are included among Head Start training materials, but local practitioners may adapt these models for their own programs. Lois-Ellin Datta's statement about Head Start's purpose is probably more accurate as a guide to practice than the emphasis placed by evaluators.

> Today Head Start may be a better program for children, providing highly regarded national leadership in developing alternate ways to serve children of low-income families from infancy through early primary school. It is not, however, the academically oriented preschool emphasized in discussions of the Westinghouse Report and in the preoccupation with changing IQ that dominated many of the debates of 1969 and 1970. (Datta, undated, p. 67)

Head Start programs cover many different emphases. Some operate as little as two hours per day, three days per week in the summer, with extensive individual services during the rest of the time. Full-day and full-week child care centers operate in some cities. Approximately 11,000 centers are engaged in experimental programs, including parent and child centers (for handicapped children). Special programs under Head Start include: Home Start, Health Start, the Child and Family Resource Program, Head Start Planned Variation with linkage to Follow Through (administered by USOE), Project Developmental Continuity, the Bilingual-Bicultural Strategy for Spanish Speaking Americans, Resource Access Project for Handicapped Children, and Head Start Collaboration with Medicaid Early and Periodic Screening.

The primary purpose of Head Start as stated by program administrators in 1973 was "to serve as a national demonstration of comprehensive developmental services for children from low-income families (U.S. HEW, 1973, p. 1). How much of the "developmental services" is interpreted as educational is a responsibility largely delegated to local coordinating agencies and effectively, by them, to individual centers.

These three modal program types serve distinct populations (Table 4.1). Private nursery schools have traditionally served middle class groups with about 90 percent of enrollments being composed of White pupils. This pattern has been slowly changing, however, Non-White enrollments rising from about

Table 4.1 Racial Composition of Preschool Enrollments, 1964-1975.

	1964	1968	1975
Private Nursery Schools			
White	91.1	90.4	88.5
Non-White	8.9	9.6	11.5
Head Start			
White	-	41.3	43.2
Majority	-	24.9	30.0
Hispanic	-	16.4	13.2
Non-White	-	58.7	56.8
Black	-	54.4	54.0
Other	-	4.3	2.8
Public Kindergartens			
White	84.2	84.0	82.4
Non-White	15.8	16.0	17.6

Sources: Public Kindergarten and Private Nursery School--NCES, Preprimary Enrollments and predecessors, 1964-1975; Head Start--Profiles of Children, 1970 and OCD, unpublished tabulations.

9 percent in 1964 to almost 12 percent in 1975. Black enrollments climbed from under 7 percent to almost 10 percent in 1975.

Public kindergarten has served the preelementary population more in line with the overall composition of the population. The percentage of Whites served has declined from 84.2 percent to 82.4 percent between 1964 and 1975. Non-Whites have made up an increasing proportion of the population, constituting 15.8 percent in 1964 and 17.6 percent in 1975. Head Start, on the other hand has primarily served children from disadvantaged families. Overall the percentage of Non-Whites (and Blacks) served has always been in excess of 50 percent.

4.2 Resources For Preschool Education

4.2.1 Public Resources

The major current source of public resources for early education below kindergarten is the federal government. However, prior to 1964, virtually no federal money was being expended on educational services or programs for young children. In 1965, Head Start, intended to be a comprehensive service program for children from low income families, was instituted. Since that time, Title I of the Elementary and Secondary Education Act, Title IV--for handicapped children,

and programs in the Bureau of Indian Affairs, have also offered education programs for young children. In recent years (Table 4.2), over 600 million dollars have been federally obligated for early education. In 1977, of this total amount, 72 percent was allocated to Head Start, 24 percent by Title I, three and one-half percent to the handicapped and about one half of one percent by the Bureau of Indian Affairs.

Title I programs were most extensive, serving over 400 thousand preelementary pupils, but with relatively low per pupil allocations (less than $400 in 1977). Head Start served fewer pupils in 1977--349 thousand--but with per pupil allocations of $1,283--more than threefold Title I expenditures per pupil.

Head Start, beginning in 1965 as a summer program, expanded immediately and enormously in its first year. And by the following summer, served over half a million children (Table 4.3). In 1969, with a budget of 96.4 million dollars, a full-year program was added which enrolled 218,000 children, and about half a million were still in the summer program. The budget had increased to $316.2 million, but Head Start never served all eligible children in the low-income group. Currently, at approximately 350 thousand enrolled, it serves less than 12 percent of eligible low-income children at a cost of $625 million. Program administrators call it a "mature demonstration program."

Table 4.2. Federal Expenditures in Preelementary Education

Program	Obligations (Millions)			Children Served (Thousands)			Cost/Child (Dollars)		
	1975	1976	1977	1975	1976	1977	1975	1976	1977
1. Head Start	412.8	427.1	447.6	349.0	349.0	349.0	1,183	1,224	1,283
2. Title I-A									
Preelementary	120.0	128.0	136.0	367.0	367.0	367.0	327	349	371
migrants	10.1	10.6	14.4	37.7	37.7	37.7	268	283	382
3. Title VI-B									
-handicapped-state	7.0	7.0	7.7	260.0	260.0	260.0	27	27	30
4. Title VI-C									
-handicapped-early ed	11.2	14.0	14.0	8.3	14.0	14.0	1,350	1,000	1,000
5. Bureau of Indian Affairs									
-kindergarten	2.3	2.5	2.7	2.5	2.4	2.4	950	1,056	1,125
-Parent Child Develop.	0.5	0.7	0.7	0.2	0.2	0.3	2,634	2,462	2,222
TOTAL	563.9	589.9	623.1	1024.7	1030.3	1030.4	-	-	-

Source: U.S. Senate Committee on Finance, Child Care, 1977.

Table 4.3. Head Start: Children Served and Budget Obligations, 1965-1978.

Year	Children Served (Thousands)	Obligation (Millions)
1965	561.0	96.4
1966	733.0	198.9
1967	681.4	349.2
1968	693.4	316.2
1969	663.6	333.9
1970	434.8	325.7
1971	415.8	360.0
1972	379.0	376.3
1973	379.0	400.7
1974	349.0	400.7
1975	349.0	412.8
1976	349.0	427.1
1977	349.0	447.6
1978	N/A	625.0

Source: Unpublished figures, Administration for Family, Youth and Children; 1975-1977 figures taken from U.S. Senate Committee on Finance, Child Care, 1977.

Nevertheless, Head Start's impact has been enormous, particularly on low income and minority children. Well over 50 percent of Head Start enrollment was and is Black; Hispanics and other races account for another 20 percent nationally. The program's concentration in urban poverty areas meant that many typical city programs served all-Black groups, whereas programs in rural or suburban areas might include more all-White or mixed groupings. Head Start created enrollment opportunities for low-income children, most of whom were Black and other minority races, at an enormous rate. Although summer enrollments would probably not show up in the annual October census survey which included information on preschool enrollments, the full-year enrollments, beginning in 1968, added an additional 218,000 children to the enrolled preschool group. Enrollments declined precipitously in 1970, remaining constant at 349 thousand since 1974. With the return of the Democratic administration, however, major increases are currently taking place and more are planned.

Following Head Start many other private and public (state and local) groups began simultaneously to develop programs to involve young disadvantaged children in school "readiness" experiences. The City of New York and the State of California both instituted large-scale public service programs of education and care for young children. The federal government, too, expanded available educational services through Title I of ESEA and the other programs discussed above.

Title XX of the Social Security Act, AFDC to support child care, and recently passed tax credits for child care expenses, also constitute indirect, but significant resources contributing to the support of early childhood education programs. In some cases, the purpose of these programs has not been primarily education, but to free mothers for jobs or work training for example the WIN (Work Incentive Training) Program. However, the effect has been to encourage enrollment, and as a corollary to increase educational experiences of youngsters.

In the past 15 years, public expenditure for kindergarten programs has also been greatly expanded. Several states have now promoted expansion of kindergarten. Particularly in the South, many state-supported kindergarten programs have been added to public school systems since 1964. Currently only Mississippi does not support any public kindergarten. Most states provide permissive kindergarten, that is, state funds are available and local districts may or may not provide services. Presently, 35 states have such programs. Fourteen states provide mandatory kindergarten that is, all communities must provide kindergarten programs for 5-year-olds in the state. However, even where a kindergarten program is mandated, attendance is voluntary. In no state is kindergarten required of 5-year-old children.

4.2.2 Private Resources

The private resources which support educational experiences for 3- to 5-year-old children come from individual parents, from non-profit foundations and organizations, from religious groups, and in some cases, from business or profit-making organizations. Most of these programs are supported wholly or in part by tuition fees. The fees may be fixed or scaled according to family income and the number of children enrolled. Many are also supported by a combination of public and private funds.

No data are available on the amounts of resources devoted to private pre-kindergarten education, but they are considerably greater than the total public expenditure. Even assuming that preschool classes are large and that teachers in private schools typically are less well paid as compared to public school teachers, so that expenditures per pupil are lower -- e.g., only 75 percent of Head Start expenditures -- still the private sector would disburse $1.2 billion (= 1,265,000 pupils x 0.75 x $1,283/pupil) which is about twice the total amount spent by the federal government on preschool services in 1977 ($623 million).

4.2.3 Resources and Preschool Opportunities

Resource expenditures are tied to the amount of educational opportunities available. Since preschooling is not mandatory, its density and availability are more closely influenced by the demand-supply dynamics of a market economy than are other parts of the school system. As parents evidence a desire to use or buy more nursery school and kindergarten services, programs have increased. More private dollars (and tax dollars) have been devoted to them.

Services have developed most rapidly where demand and use is greatest. On the other hand, services cannot be utilized, or demand may not be able to manifest itself, especially for the economically disadvantaged, if no services are available or if there is no realistic access to them. And this is often a matter of where resources are being expended, and for what type of product or service at what price. Public policy can and does alter the "simple" market demand system by making funds immediately available for the creation of new educational opportunities. For preschool education this has been dramatically the case.

An important concomitant of the origin of the resources is differential access of pupils to programs or educational opportunities. Most publicly supported programs for 3- and 4-year-olds are tied to poverty criteria which determine

eligibility. High and middle income families are legally excluded from these programs. Similarly, private programs which usually have tuition fees attached tend to preclude entry of children from low-income families. Other types of private programs may also be exclusive, based upon other criteria, such as a business which provides nursery school only for its employees.

Since a greater proportion of minority than White children are from low-income families, unemployed, or concentrated in central cities where many of the public programs were first operationalized, a higher proportion of opportunities for Black than for White preschool children were created by this new influx of public funds. Training programs for WIN mothers, AFDC child care payments, Title I programs, and welfare support services tied to child care probably also favor the increase in educational opportunities for Blacks because of the usual compounding of race and poverty in our society.

These policies are probably offset to some degree by the increased incentives provided to middle income working families--Black and White--to deduct child care expenses from tax returns. This deduction was first allowed in 1971. However, even during the first years of the deduction, a much greater proportion of White families continued to fall above the maximum income ceiling

than Black. Thus, the increased opportunity was afforded more to Blacks than to Whites on the whole. The total impact of the recent elimination of the income ceiling is unknown.

Public kindergarten programs attached to school systems are, of course, available to all children in the state or community. However, in many states rather strict age criteria are applied. Thus, a child attending free public kindergarten must usually be 5 years of age on or before some date, usually within the first semester of the school year. Occasionally younger children may be admitted to kindergarten programs, if space permits, on a tuition basis, but the tuition charge severly restricts the number of parents who can avail themselves of this educational opportunity.

Resources are the instrumental means to maintaining or increasing educational opportunities for young children, although we concentrate our analysis in this report on the effects of resources: the educational offerings and enrollments made possible by expenditures; additional effort is needed to understand the dynamic relationship between resource allocation and the demand for and quality of schooling for young children.

4.3 Preschool Enrollment and Population Size

In this section, we describe the overall enrollment profile of 3- to 5-year-olds in educational preschool programs. Total enrollments are described in terms of the age, race, and socio-economic status of the pupils. We discuss both the number of enrollees and the rate of enrollment for each group.[2]

Two additional dimensions are used to indicate the type of educational experiences in which children enroll. These are control of the school (public or private) and duration of the program (half-day or full-day). These dimensions give us a general idea about the kinds of educational experiences preschool children receive, and how such characteristics vary for children of different races. Finally, we discuss context factors which influence the availability of preschool programs.

The primary data base we have used in this discussion is the series of yearly reports (1964-1975) prepared by the National Center for Education Statistics (in 1973 and 1976 by the Bureau of the Census) on the number of 3- to 5-year-old children in the population and the number enrolled in school. These data have been collected yearly since 1964, as part of the October Current Population Survey by the Bureau of the Census under a contract from the U.S. Office of Education. Since 1964, data have been tabulated by such characteristics as: type and control of school, race (White and Non-White from 1964-1968),

[2]All data discussed in this chapter are presented in Appendix D. Definitions and some explanations of specific problems related to the data are in Appendix C.

residence area and region, occupation of the household head, and family income. After 1968, additional dimensions such as education of household head, full-day or part-day enrollment, and characteristics of 5-year-olds in primary school were added to the analyses. Also, after 1968, race was divided into three categories: White, Other races (including Black) and Black.

4.3.1 The Population of Three- and Four-Year-Olds: 1964-1976

In order to understand changes in preschool enrollments, it is necessary first to examine changes in the total population of potential enrollees. Since 1964, the first year for which preschool enrollment figures are available, the number of 3-, 4-, and 5-year-old children in the population has undergone a steady and almost continuous drop. In 1964, 8.4 million children were 3 or 4 years old compared with 6.2 million in that group in 1976, an overall decline of about 26 percent. These children constitute the core group of potential enrollees. The White portion of this population has fallen somewhat more than the Non-White (28% for Whites compared to 13% Non-Whites). These differential rates of decline have resulted in a change in the composition of the total population of 3- and 4-year-olds from 84.7 percent White to 82.2 percent White.

Blacks and Other Non-Whites were only treated separately in these data beginning in 1969. However, between 1969 and 1976, we can describe population trends for each of these groups. During this period, the number of White 3- and 4-year-olds declined 17 percent. The Black population also declined, though somewhat less than the White (15.2%). However, the number of Other Non-Whites increased by about 30 percent during this period. This increase is also reflected in changes in the composition of the total 3- and 4-year-old population. White 3- and 4-year-olds decreased from 83.1 to 82.2 percent of the total, while Blacks increased slightly (from 15.4 to 15.5%), and Other Non-Whites increased from 1.5 to 2.3 percent of the total. Thus, the greatest change between 1969 and 1976 was in the percentage of Other Non-Whites in the 3- and 4-year-old population. Blacks declined during this period from 92.4 to 85.4 percent of the Non-White population.

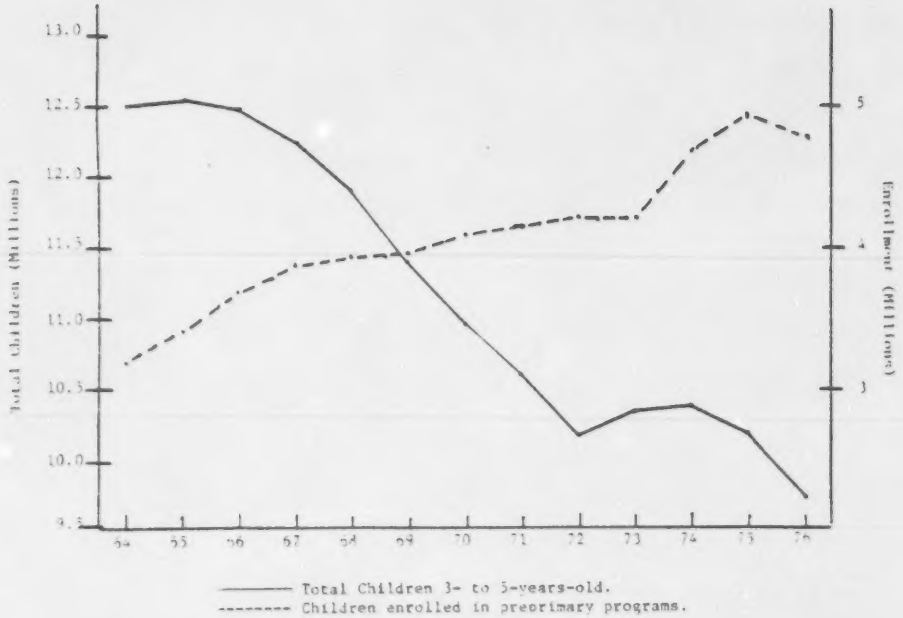
4.3.2 Preschool Enrollment of Three- and Four-Year Olds

In spite of the decline in the total population, the number of children enrolled in preschool programs has climbed steadily since 1964 (Figure 4.1).[3] The number of 3- and 4-year-olds enrolled reached 1.95 million in 1976 from 798 thousand, a 145 percent increase. White enrollment in this age group increased 135 percent from 664,000 children in 1964 to 1.56 million children in 1976. Non-White enrollment increased 194 percent from 134,000 in 1964 to 394,000 in 1976. Between 1969 and 1976, the increase in Non-White enrollment was somewhat less than that for Whites (51% for Non-Whites; 67% for Whites). The increase for Blacks was even less (38%), while other Non-Whites increased by 216 percent.

[3] All figures in this chapter are compiled from data contained in the series of reports on Preprimary Enrollment of Children Under Six prepared by the National Center for Education Statistics, 1964-1972 and 1974-1975, and in the Bureau of the Census report, Nursery School and Kindergarten Enrollment, 1973 and 1976.

In comparison to their representation in the total population of 3- and 4-year-olds, Non-Whites have been somewhat overrepresented in preschool enrollments. This finding is not unexpected, since Non-Whites make up such a large percentage of the group toward which compensatory preschool programs are aimed.

Figure 4.1 Population of Children 3- to 5-Years Old and Their Preschool Enrollment, 1964-1976.

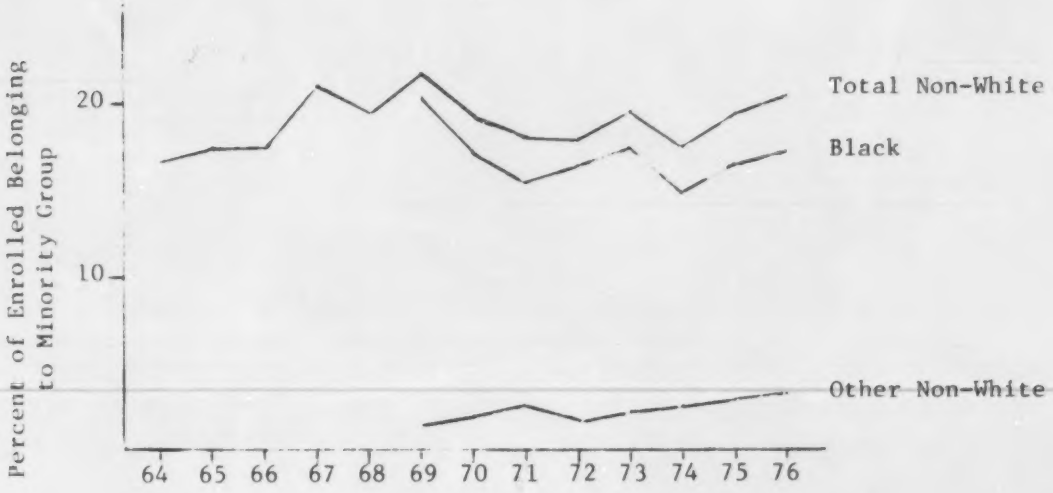


In 1964, Non-Whites made up 16.8 percent of preschool enrollments, but only 15.3 percent of the population. By 1969, Non-White enrollments had increased to 21.9 percent, while Non-Whites made up only 16.9 percent of all 3- and 4-year-olds. Blacks constituted 20.3 percent of the enrollees and 15.4 percent of the population, while Other Non-Whites were only slightly overrepresented (1.6% of enrollees; 1.5% of the population). Between 1969 and 1976, the percentage of Black preschool enrollees declined somewhat (to 17.1%), though Black enrollment was still higher than their representation in the population (15.4%). Other Non-Whites were even more overrepresented, with 3.1 percent of enrollees and 2.3 percent of all 3- and 4-year-olds. Whites have been consistently underrepresented in 3- and 4-year-old preschool enrollments, and accounted for a smaller part of total enrollments in 1969 and 1976 than in 1964. This increase in minority representation in the enrolled group is at least partially attributable to the increase in compensatory programs, which are targeted toward disadvantaged (primarily Non-White) pupils (Figure 4.2).

The total rate of enrollment for 3- and 4-year-olds has more than tripled since 1964, from 9.5 percent to 31.3 percent in 1976. Minority and White enrollment rates have increased along parallel paths, with Non-Whites consistently enrolling 3- and 4-year-olds at a higher rate than Whites. The Non-White enrollment rate in 1964 was 10.4 percent, while the White enrollment

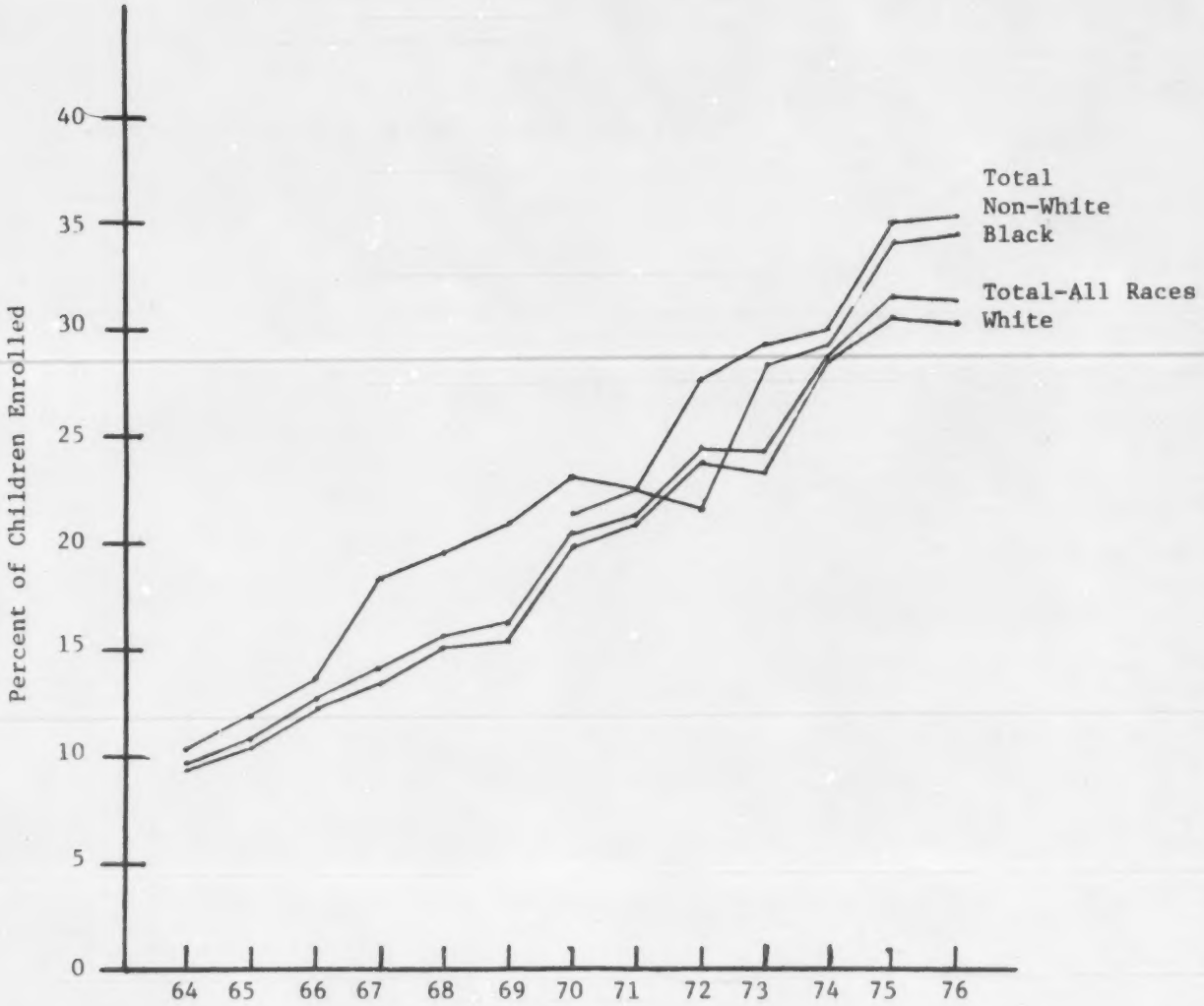
rate was 9.3 percent; in 1976 the rates were 35.4 percent for Non-Whites, (a 240% increase) and 30.4 percent for Whites (a 227% increase).

Figure 4.2 Percents of 3- and 4-Year-Old Enrolled Group Belonging to Minority Groups



Since 1969, when more detailed racial differentiation became available, enrollment rates have increased for all groups, but the increases have been greatest for Other Non-Whites. Enrollment for this group rose from 17 percent in 1969 to 41 percent in 1976, surpassing the rates for both Blacks and Whites. A maximum difference of six percentage points has separated Black and White enrollment rates during these years. And the rate of Black enrollment remains about 3 to 5 percent higher than White for this age group (Figure 4.3).

Figure 4.3 Preprimary Enrollment Rates of 3- and 4-Year-Old Children by Race, 1964-1976



Since the total population of 3- and 4-year-olds has declined, one might expect a corresponding increase in the proportion of these children enrolled in preschool programs. However, the decline in total population can account for only a small part of the increased proportion of children enrolled. Using a 1964 base, we calculated a constant enrollment rate for the declining population and found that it accounted for between one third and one half of the actual rate of enrollment.

The real increases in enrollment rates surely indicate an increased availability of programs, and may reflect an increased demand for preschool as well. It is important to bear in mind, however, that small changes in absolute enrollments of the 3- and 4-year-olds imply large percentage changes as the base numbers remain small. There are many more 5-year-olds in school, so that numerically larger enrollment changes for 5-year-olds will appear smaller, in percentage terms, than those for 3- and 4-year-olds.

4.3.3 The Population of Five-Year-Olds: 1964-1976

Population changes for 5-year-old children parallel those for 3- and 4-year-olds. The total number of 5-year-olds has declined by about 17 percent since 1964, from 4.1 million to 3.4 million children. Most of the decrease has been in the White population, which has declined 17.7 percent; Non-Whites only

declined by one-half of one percent. Thus, the composition of the 5-year-old population has shifted from 85.2 percent White in 1964 to 82.7 percent White in 1976.

Between 1969 and 1976, the Non-White decline that has ocurred has been in the Black population of 5-year-olds, which decreased about 9 percent, from 586,000 to 533,000 children, about half the White percentage decline. The number of Other Non-Whites increased during this period, from 64,000 to 71,000 children (a 10.9% increase). The percentage of White children in the population declined slightly (from 83.8% to 82.7%), while the percentage of Blacks and Other Non-Whites increased (from 14.6% to 15.3% for Blacks, and from 1.6% to 2.0% for Other Non-Whites). Black children made up 90.2 percent of the Non-White 5-year-old population in 1969 and 88.2 percent in 1976.

4.3.4 Five-Year-Old Enrollment

Five-year-old preschool enrollment has increased steadily since 1964, even though the increases have not been as dramatic as those for 3- and 4-year-olds. In spite of a 16 percent population decline, the total number of 5-year-olds enrolled in preschool increased 19 percent between 1964 and 1975 (from 2.4 million to 2.9 million children). The increase has been considerably larger for Non-Whites than for Whites (52% for Non-Whites; 14% for Whites).

Between 1969 and 1976, White enrollment declined somewhat and then increased, showing a net decrease of 0.2 percent. Black enrollment has increased about 24 percent and Other Non-White enrollment has increased by 18 percent.

White 5-year-olds tend to be overrepresented in preprimary enrollments, unlike White 3- and 4-year-olds, who are underrepresented. In 1964, White children made up 87 percent of the 5-year-old enrollment, but only 85 percent of the population. Non-Whites made up 13 percent of enrollments, and 15 percent of the population. Since 1969, increases which have occurred for Blacks and Other Non-Whites have brought all of these groups closer to their representation in the total population. In 1969, Whites were overrepresented by 3 percent[4] (86.3% of enrollments, 83.8% of the population) Blacks underrepresented by 17 percent[4] (12.1% of enrollments; 14.6% of the population); and Other Non-Whites made up 1.6 percent of both enrollment and the total population. By 1975, White enrollment representation declined and that for Blacks increased, thus moving closer to their respective proportions in the population; but Other Non-Whites were underrepresented, with 1.8 percent of preprimary enrollments and 2.0 percent of the population (Figure 4.4).

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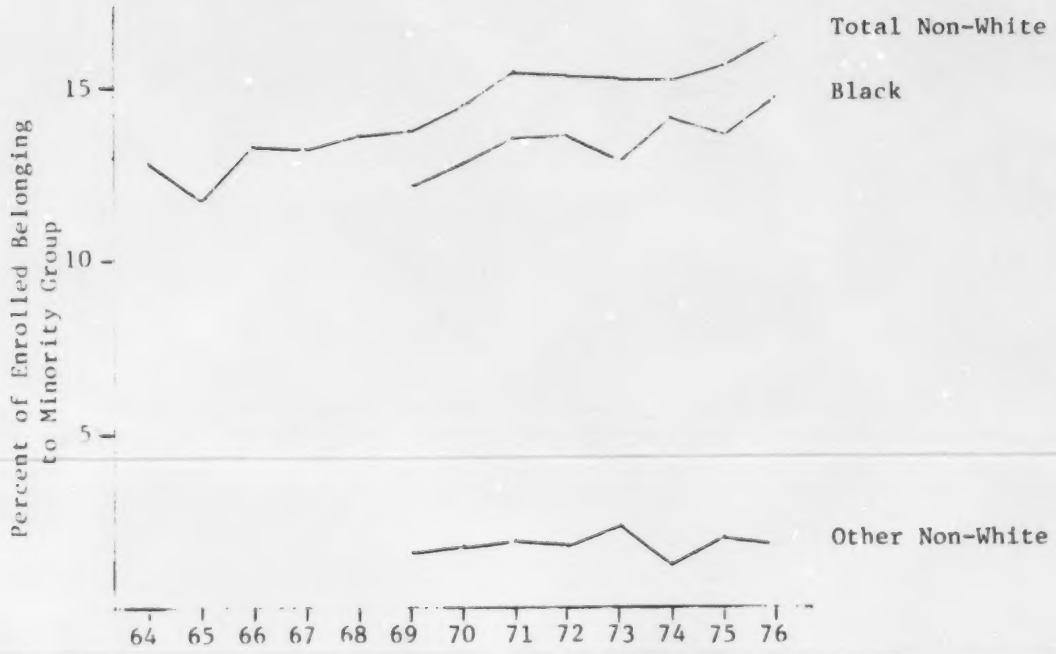
[4] These figures are the difference between the enrollment rate and the population percentage value, as a percent of that value.

Figure 4.4 Percent of 5-Year-Old Preprimary Enrolled Group Belonging to Minority Groups



When total 5-year-old enrollment is considered, including 5-year-olds in primary school, Whites and Blacks are more closely represented in proportion to their population (Whites: 83.6% of enrollment, 82.7% of the population; Blacks: 14.6% of enrollments, 15.3% of the population), and Other Non-Whites are overrepresented, with 2.2 percent of enrollment and 2.0 percent of the population.

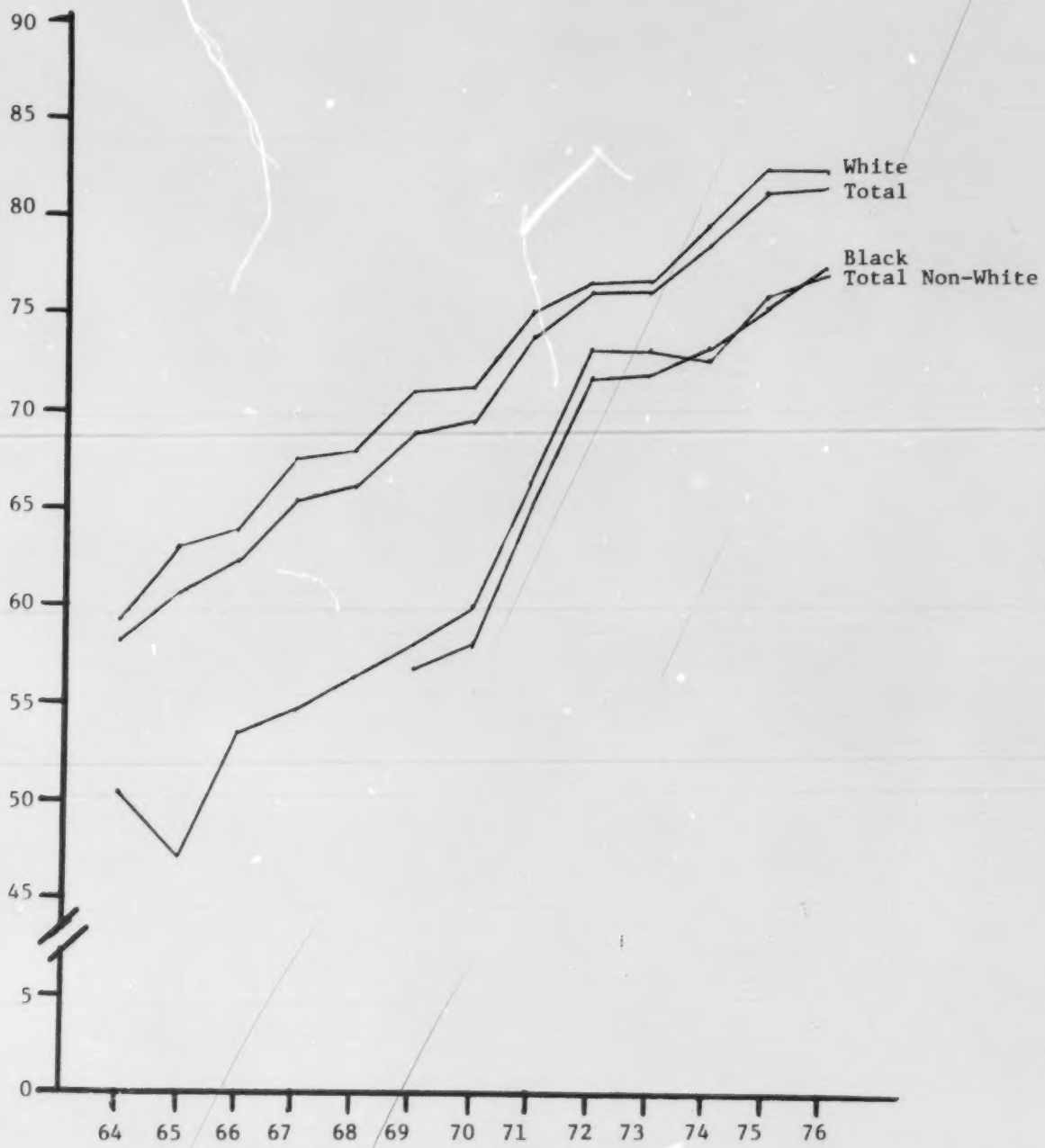
Preprimary enrollment rates for 5-year-olds have climbed each year since 1964 (from 58.1% in 1964 to 81.4% in 1976). The rates have increased for both Whites (59.2% to 82.3%) and Non-Whites (50.4% to 77.0%), but Non-White enrollment rates have climbed faster (a 23.1 point increase for Whites; 26.6 points for Non-Whites). The rate of White enrollment was already quite high relative to Non-Whites in 1964, (59.2% for Whites, 50.4% for Non-Whites). By 1976, Non-Whites had narrowed the gap of 9 percentage points between White and Non-White preprimary enrollment rates to just over 5 points. In 1976, the preprimary enrollment rate of White 5-year-olds was 82.3 percent; of Non-Whites 77.0 percent. Enrollment rates for Blacks were the lowest, while those for Other Non-Whites often equaled or surpassed those for Whites (Figure 4.5).

When the total 5-year-old enrollment is considered (primary and preprimary), the gap between White and Black enrollment was almost entirely closed by 1975. The total enrollment rate for White 5-year-olds in 1975 was 90.5 percent, for Blacks 89.9 percent. Other Non-Whites still had the highest rate, almost 96 percent. These rates approximate the present enrollment rates for children in higher grades of elementary school.

4.4 Preschool Enrollment and Social Class

Social class differences are related to enrollment in preschool programs, as well as to race. We will discuss enrollments in terms of occupation and education of the head of household, and mother's participation in the labor

Figure 4.5 Preprimary Enrollment Rates of 5-Year-Old Children by Race, 1964-1975



force. We expect these factors to be related to differing needs and desires for preprimary education.[5]

4.4.1 Population of Three- to Five-Year-Olds and Occupation of Head of Household: 1964-1975

Race and social class are strongly related, and we must understand their interaction before we can interpret any social class differences in enrollment. We can characterize basic social class trends for White and Non-White 3- to 5-year-olds in terms of the occupation of their household heads.

In 1964, 34 percent of all 3- to 5-year-olds lived in families with white collar household heads, while slightly over half (51%) were in blue collar families. However, the white collar group was predominately White (95%), while the blue collar group included significant numbers of Black children (82% White, 19% Non-White). About 6 percent of all children lived in the families of farm workers, and this group was 77 percent White. Finally, 9 percent lived with individuals who were unemployed or not in the labor force (NILF). Only 62 percent of these children were White. Thus, most White children were living in white collar or blue collar families, about 5 percent in farm families and about 7 percent in families with unemployed heads. In contrast, most Non-White children were in families with blue collar (59%) or unemployed heads (23%). A relatively small number were in white collar (10%) or farm (9%) families.

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[5] We have abstained from analyses of family income and preschool enrollment, because the family income data were too gross to inform adequately about this issue.

Between 1964 and 1975, there was a slight increase in the percentage of 3- to 5-year-old children living in white collar families (from 34% to 35%) and a decrease in the percentage of children in the blue collar group (from 51% to 45%). However, the biggest changes during this period were in the farm and unemployed groups. The number of children in farm families declined sharply, from 526,000 (or about 6% of the population) to 261,000 (3% of the population). In addition, this group became increasingly White (77% White in 1964, 91% White in 1975). Thus, while almost 9 percent of Non-White children lived in farm families in 1964, only 1.5 percent of Non-Whites were in this group in 1975.

The percentage of children in families with unemployed heads increased for all racial groups (from 9% in 1964 to 17% in 1975), but especially for Blacks. In 1964, about 23 percent of Non-White 3- to 5-year-olds were in families with unemployed heads. By 1975, this group had increased to 37 percent of all Non-White children--41 percent of the Black children and 13 percent of the Other Non-Whites.

The number of Non-White children in the white collar group increased considerably, from 176,000 in 1964 to 307,000 in 1975. However, even in 1975, children in white collar families made up only 18.5 percent of the Non-White population. Much of this group was apparently made up of Other Non-Whites; in 1975, 45 percent of these children were in white collar families. Only 15 percent of Black children were in white collar families in 1975.

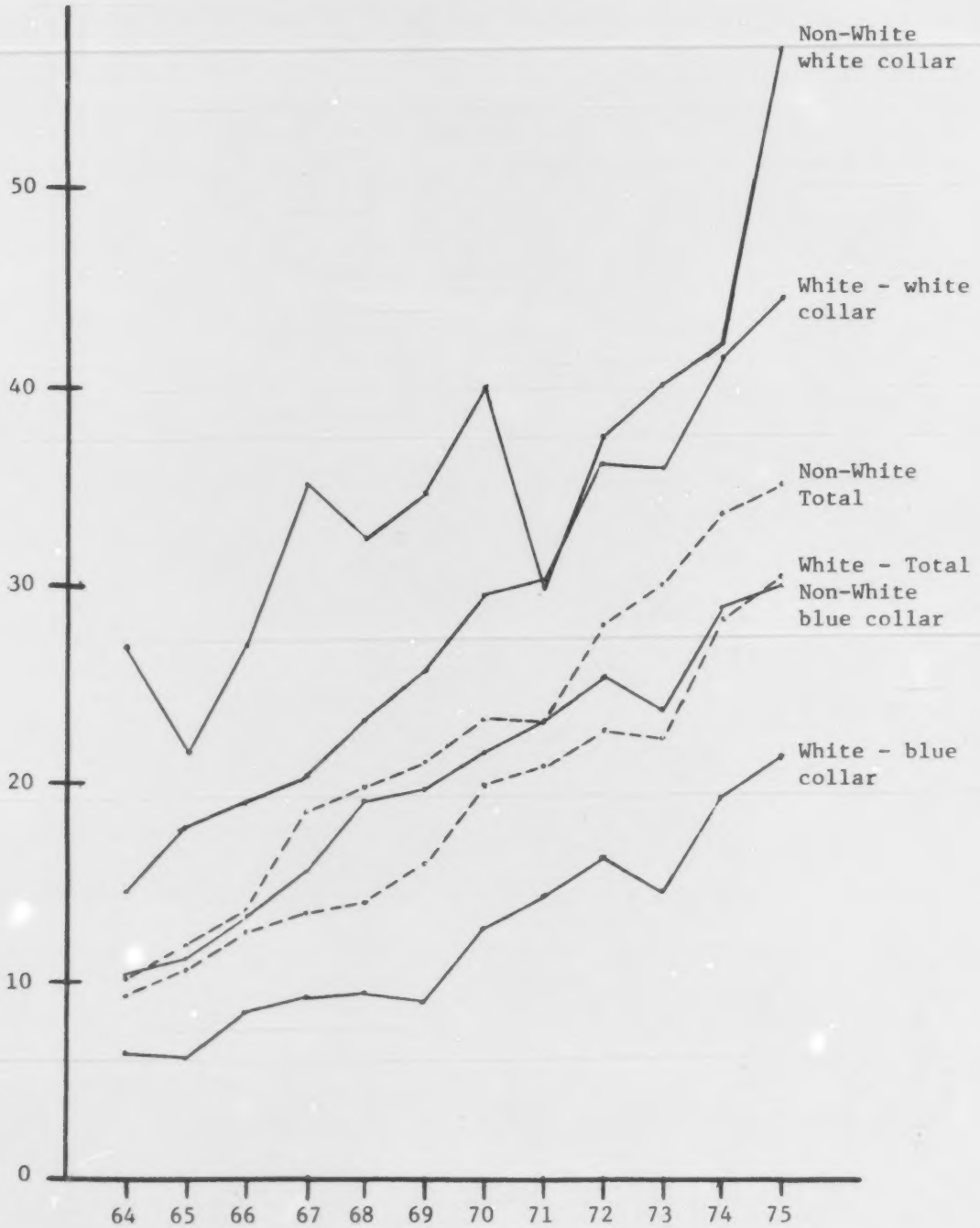
In general, White children in 1975 were still concentrated in the white collar and blue collar groups, with many fewer children living in farm families than in 1964, and more children in families with unemployed heads. Of the Black children, slightly more were in white collar families in 1975 than in 1964, but many more were living in families in the unemployed group. Other Non-Whites, who were counted separately after 1969, were more similar to White rather than Black children, with most children in white collar and blue collar families, and relatively few in families with unemployed heads.

4.4.2 Preschool Enrollment of Three- and Four-Year-Olds and Occupation Of Head of Household

The enrollment of 3- and 4-year-olds has been growing steadily for all occupational groups since 1964, with Blacks enrolling at a higher rate than Whites within each occupational category. However, enrollment rates differ considerably for the various occupational groups. A larger difference exists between enrollment rates for white collar and blue collar families than for Black and White racial groups as a whole (Figure 4.6).

The enrollment of 3- and 4-year-olds from white collar families is much higher than that of any other group (44.5% for Whites, 55.8% for Blacks in 1975). Children of workers who are unemployed or not in the labor force (NILF) have the next highest enrollment rates (27.1% for Whites, 30.6% for Blacks in 1975).

Figure 4.6 Participation in Preprimary Education by 3- and 4-Year-Olds 1964-1975, by Race and Occupation of Household Head



These rates are closely matched by children of blue collar workers (21.3% for Whites, 29.3% for Blacks in 1975). Children of farm workers have a much lower rate of enrollment than any other group (11% for Whites, 25% for Blacks in 1975), although Blacks have increased the enrollment of farm children enormously (from about 1.8% in 1964) and it is now approaching the rates in the other three occupational categories.

The preschool enrollment of Non-White children from white collar families has roughly doubled in rate since 1964 (from 26.7 to 56.6%). In 1975 well over half the 3- and 4-year-old children of white collar Non-White families were enrolled in preschool. However, because of the compounding of race and income level in American society, this amounted to a relatively small proportion of the Non-White children enrolled in all preschool programs (25.0% in 1964, 30.2% in 1975). In contrast, enrollments of White 3- and 4-year-old children from white collar families accounted for 60.3 percent of total White enrollment in 1964 and 55 percent in 1975.

White collar enrollment rates for Whites grew also, approximately tripling in the years 1964-1975 (from 14.4 to 44.5%). However, even though enrollment rates for this group grew steadily, they never surpassed enrollment rates for Blacks except in 1971.

Between 1969 and 1975, when Blacks and Other Non-Whites were counted separately, white collar enrollment rates grew for both racial groups. However, the increase for Other Non-Whites has been much greater than for Blacks, with the rate for Other Non-Whites increasing from 27 percent in 1969 to over 60 percent in 1975. This increase is especially significant since the white collar category represents a substantial part (45%) of the Other Non-White population.

Between 1964 and 1969, rates of white collar enrollment for Non-Whites and Whites have differed by as much as 15 points. The rates were more similar between 1970 and 1973, but began to diverge widely again in 1974 and 1975. This latter divergence may indicate the taking hold of affirmative action programs in 1973-1977 and increased opportunities in white collar occupations for Black (especially female) workers.

The rate of enrollment among children of blue collar workers has roughly tripled for both racial groups (from 6.4 to 21.3% for Whites from 10.3 to 29.3% for Non-Whites) and the increase has been parallel. Enrollment rates have averaged about 8 points higher for Non-Whites than Whites from 1964-1975. Again, enrollment rates for Other Non-Whites increased markedly, starting from a point below Black enrollment rates in 1969 (20% for Blacks, 14% for Other Non-Whites) and surpassing them in 1975 (29% for Blacks, 35% for Other Non-

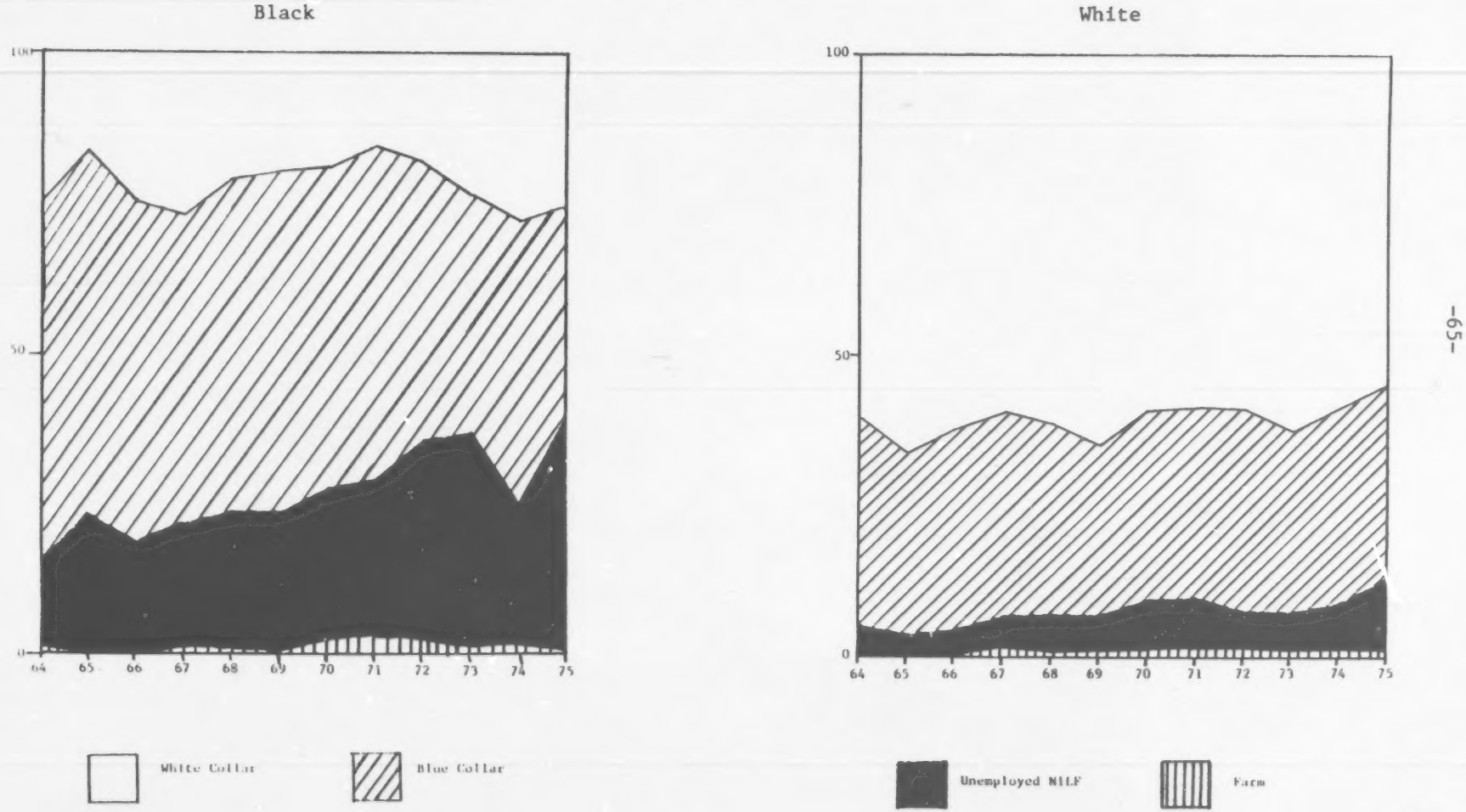
Whites).

If we look at the social composition of the White and Non-White enrolled groups (Figure 4.7) we see that children from blue collar families accounted for 59 percent of all Non-White enrollment in 1964, and 47 percent in 1974, but declined markedly in the next year to 30 percent in 1975. These changes reflect the decline in the number of Blacks in blue collar occupations as well as expanded opportunities for children of unemployed workers. Blue collar White enrollment was 35 percent of the total White enrollment in 1964 and was still about one-third of all White enrollment of 3- and 4-year-olds (31.9%) in 1975.

The decline in the enrollment of Black children from blue collar and white collar families as a percent of the total Black enrollment is made up by increases in the proportion of enrollment from the unemployed and farm groups.

For example, from 1964-1968, enrollment by children of unemployed workers accounted for about 20 percent of the total Non-White enrollment. From 1969-1971, about 24 percent of total Black enrollment was of such children. In 1975, over one-third (38%) of Black 3- and 4-year-old enrollment in preschool consisted of children whose parents were in the unemployed category.

Figure 4.7 Composition of Black and White 3- and 4-Year-Old Children Enrolled in Preprimary Programs by Occupation of Head of Household.



Enrollment by children of unemployed workers has grown steadily for both White and Non-Whites since 1964 (from 6.5 to 27.1% for Whites; 6.3 to 30.3 % for Non-Whites). However, these rates do not show what might have been a predicted leap in 1967-1968 or 1968-1969 at the advent of the Head Start program. This absence of a bulge is puzzling, when over 200,000 new preschool "slots" were created in Head Start's year-long program in 1968. It might be that many of these children were in public programs already, and the advent of Head Start caused them in some cases to switch programs rather than to enroll for the first time.

The number of enrolled children of unemployed workers has increased along with the rates for both Whites and Non-Whites. However, as the graphs on social composition of the total enrollment indicate, although the rates of enrollment and the number of children enrolled are roughly equal for both groups, the proportion of total preschool enrollment within race which is accounted for by this group is much greater for Non-Whites than for Whites. Enrollment of children of the unemployed was 38 percent of total Black enrollment in 1975, while enrollment of these children was 11.8 percent of total enrollment for Whites.

The farm population is also increasingly participating in preschool experiences, although the total farm population for both Whites and Non-Whites is extremely

small and has been in a steady decline. The total enrolled population of Non-Whites from farm families is estimated to have increased from 2,000 to 3,000 from 1964-1975. However, because of the enormous decline in the Non-White farm population (from 109,000 in 1964 to 13,000 in 1975), this shows up as an increase in the enrollment rate of from 1.8 to 25%. White farm children increased their enrollment rates from .6 percent in 1964 to 11 percent in 1975, with an increase in numbers enrolled from 2,000 to 18,000. But the farm population of 3- and 4-year-olds fell over 50 percent from 348,000 to 164,000.

In general, these results point to a polarity in preschool enrollment patterns. Children from white collar families make up the largest part of the White preschool enrollment, while children from families with unemployed heads are the largest single group in the Black enrolled population. This suggests that among 3- and 4-year-olds children of different races are attending different kinds of programs.

4.4.3 Preschool Enrollment of Five-Year-Olds and Occupation of Head of Household

Five-year-old enrollment rates have increased from 1964 to 1975 for both White and Non-White populations. White enrollment rates are consistently higher than Non-White for all occupational groups, in contrast to rates for

the 3- and 4-year-old group. White enrollment has increased from 59.2 percent to 82.7 percent. Non-White enrollment has increased about the same amount, from 50.4 percent to 76.1 percent. There has been a consistent 5 to 15 point difference between White and Non-White total enrollments.

Occupational categories are related to the enrollment of 5-year-olds, though their influence is not as strong as with the 3- and 4-year-old group. In general, children in white collar families have the highest enrollment rates (80 to 90% in 1975), with those in blue collar families or with unemployed parents not far behind. Farm children of all races have always had the lowest enrollment rates (only about 65% in 1975--and even lower for Blacks).

Enrollment rates for Non-White farm children have increased dramatically, from only 9.8 percent in 1964 to 64.1 percent in 1975. While this change probably does reflect some expansion in opportunities, it is important to remember that the farm population has not only declined sharply during this period, but has also become increasingly White. Thus, the number of children in the Non-White farm group is extremely small (only 25,000 in 1975).

If we compare the social class composition of each enrolled group by race, the Non-White group of enrolled 5-year-olds is much more predominatly blue

collar and unemployed than the White group. Black enrollment was 46.8 percent blue collar, 38.5 percent NILF in 1975. Even though white collar enrollment rates are high, families with unemployed heads made up almost three times as much of Black enrollment as white collar families. White 5-year-old enrollment is about equally divided between white and blue collar families with between 41 percent and 48 percent in each group. Farm and NILF families account for less than 12 percent of total enrollment. For both groups, these proportions reflect the total population composition.

In general, race seems to be a more critical determiner than occupation or class for enrollment rates of the 5-year-old group. This is partly due to the availability of free public kindergartens for 5-year-olds. While there has been a general expansion of kindergarten opportunities, participation in the programs that do exist is not so dependent on family income or eligibility as is the case for 3- and 4-year-olds. Thus, increases in participation have occurred for all racial and social class groups, and the social class composition of each enrolled group by race approximates that of the population at large.

4.4.4 Preschool Enrollment of Three- and Four-Year-Olds and Education of Head of Household

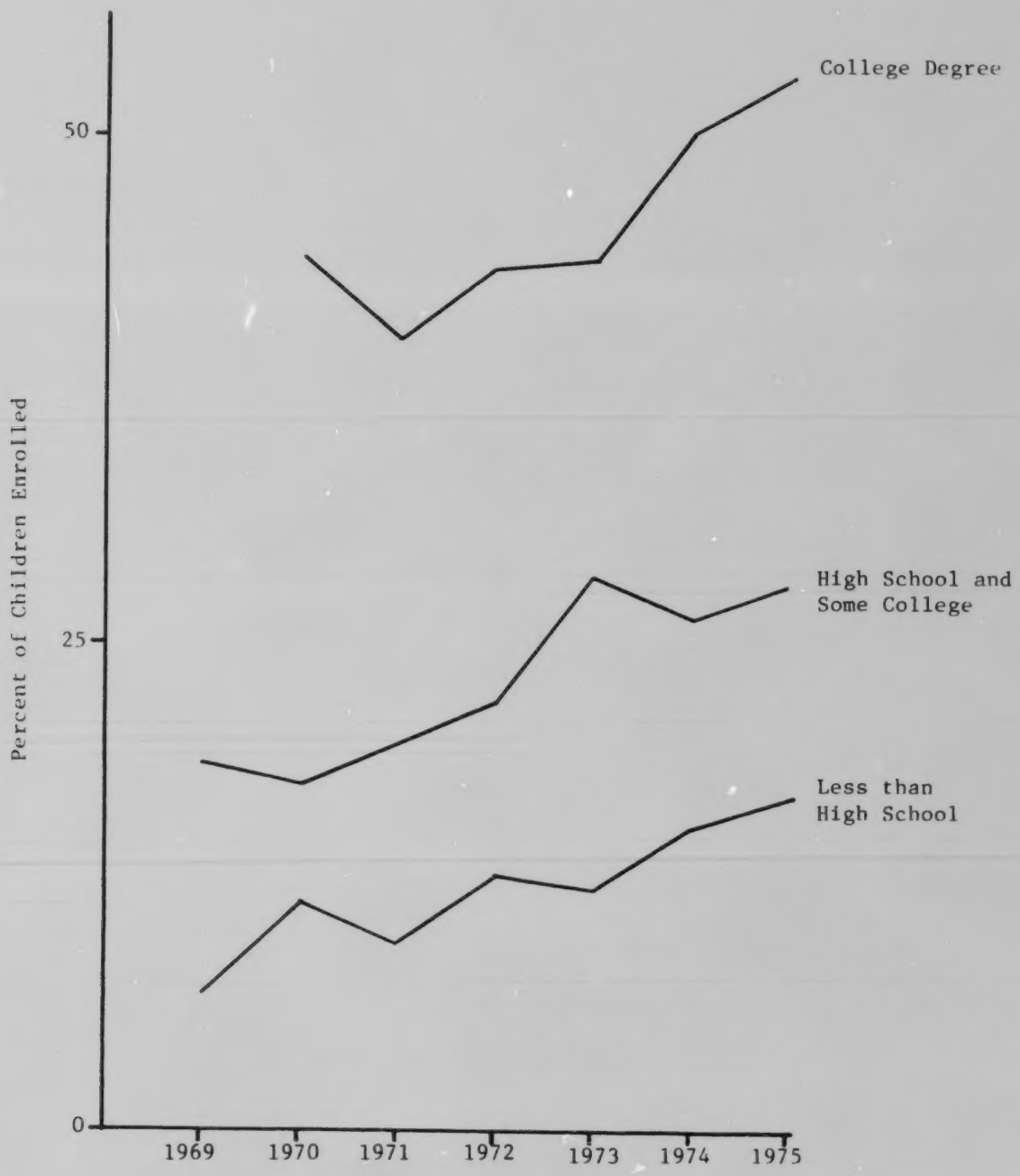
The level of education of the head of household is another social class factor which influences enrollment of preschool children. In general, children in

families with more highly educated heads are more likely to be enrolled in preschool programs. However, the differences related to level of education are much greater for White than for Non-White children.

In 1975, White 3- and 4-year-olds whose parents had less than a high school education enrolled at about 60 percent of the rate of children whose parents had completed high school or high school and some college (17% as compared to 28.7%). Children whose parents had completed college enrolled at almost double the rate of children whose parents are high school, but not college, graduates (54.1%). The rates have increased somewhat since 1969 for all groups (Figures 4.8 and 4.9).

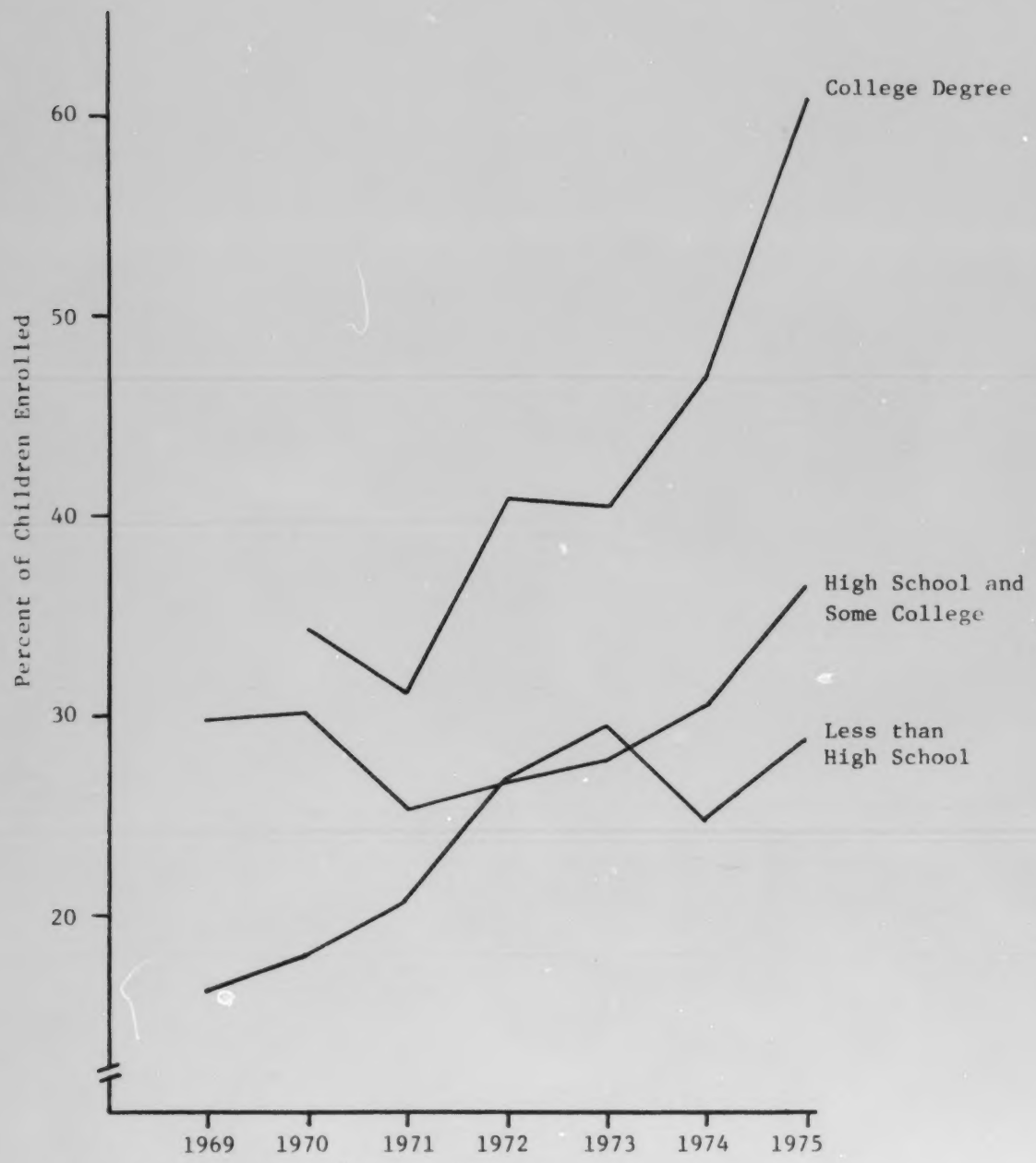
In general, education level of household head is more strongly related to 3- and 4-year-old enrollment rates for Whites than for Blacks. For Blacks, the enrollment rates of children whose parents are high school graduates, but have not completed college, did not significantly increase between 1970 and 1975, when they were about 35 percent. Enrollment rates for the children of both Black high school dropouts and Black college graduates have increased sharply, however, from 13 and 24 percent, respectively, in 1970 to 33 and 63 percent in 1975. The latter group was a relatively smaller portion of total 3- and 4-year-olds for Blacks (6%) than for Whites (19%), even by 1975.

Figure 4.8 Preprimary Enrollment Rates of White 3- and 4-Year-Old Children by Education of the Head of Household*



*Children with no household head not included.

Figure 4.9 Preprimary Enrollment Rates of 3- and 4-Year-Old Non-White Children by Education of Head of Household*



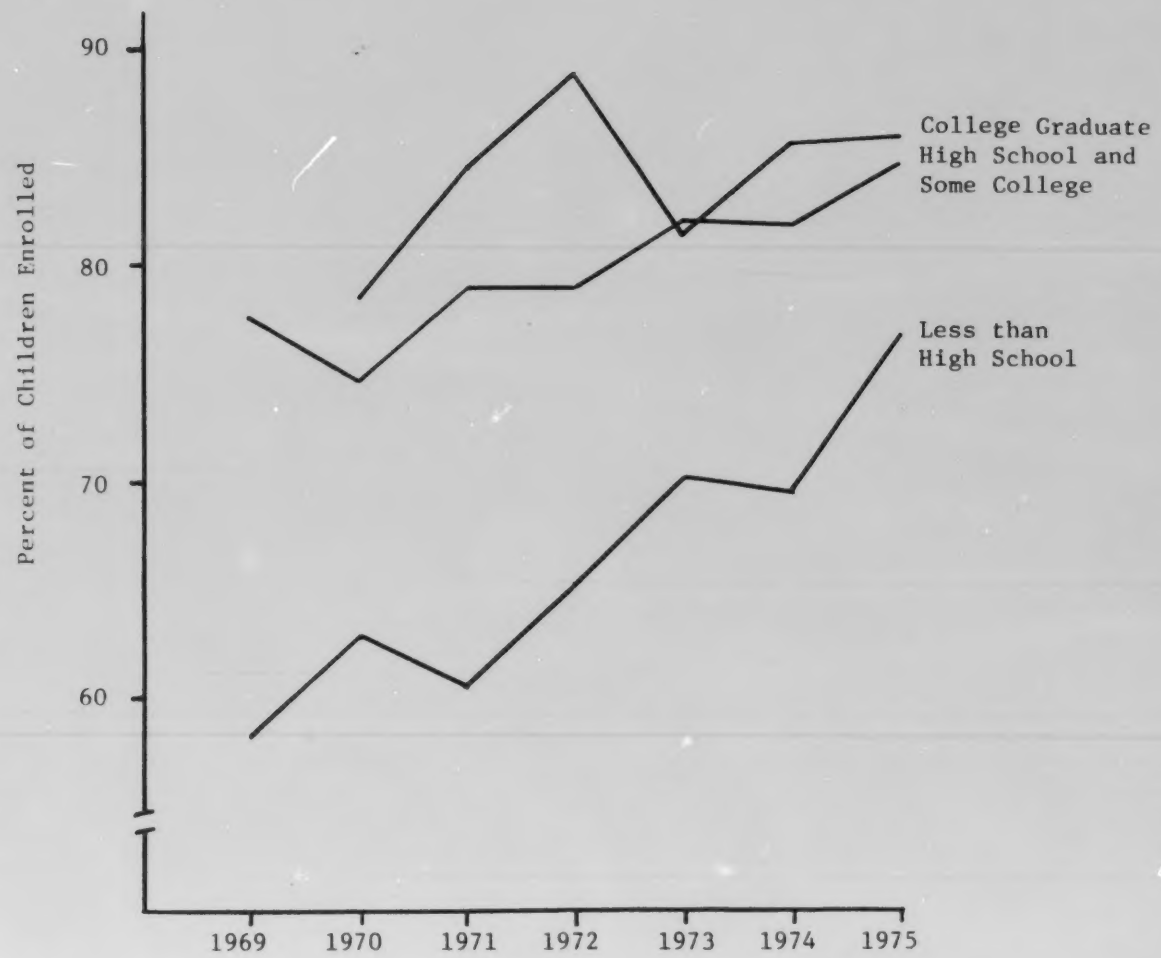
*Children with no household head not included.

4.4.5 Preschool Enrollment of Five-Year-Olds and Education of Head of Household

Enrollments of 5-year-olds are less differentiated by educational level of the household head than the enrollments of 3- and 4-year-olds. This is because 5-year-olds are typically enrolled in public kindergartens, and children's participation is less dependent on economic criteria and parental discretion.

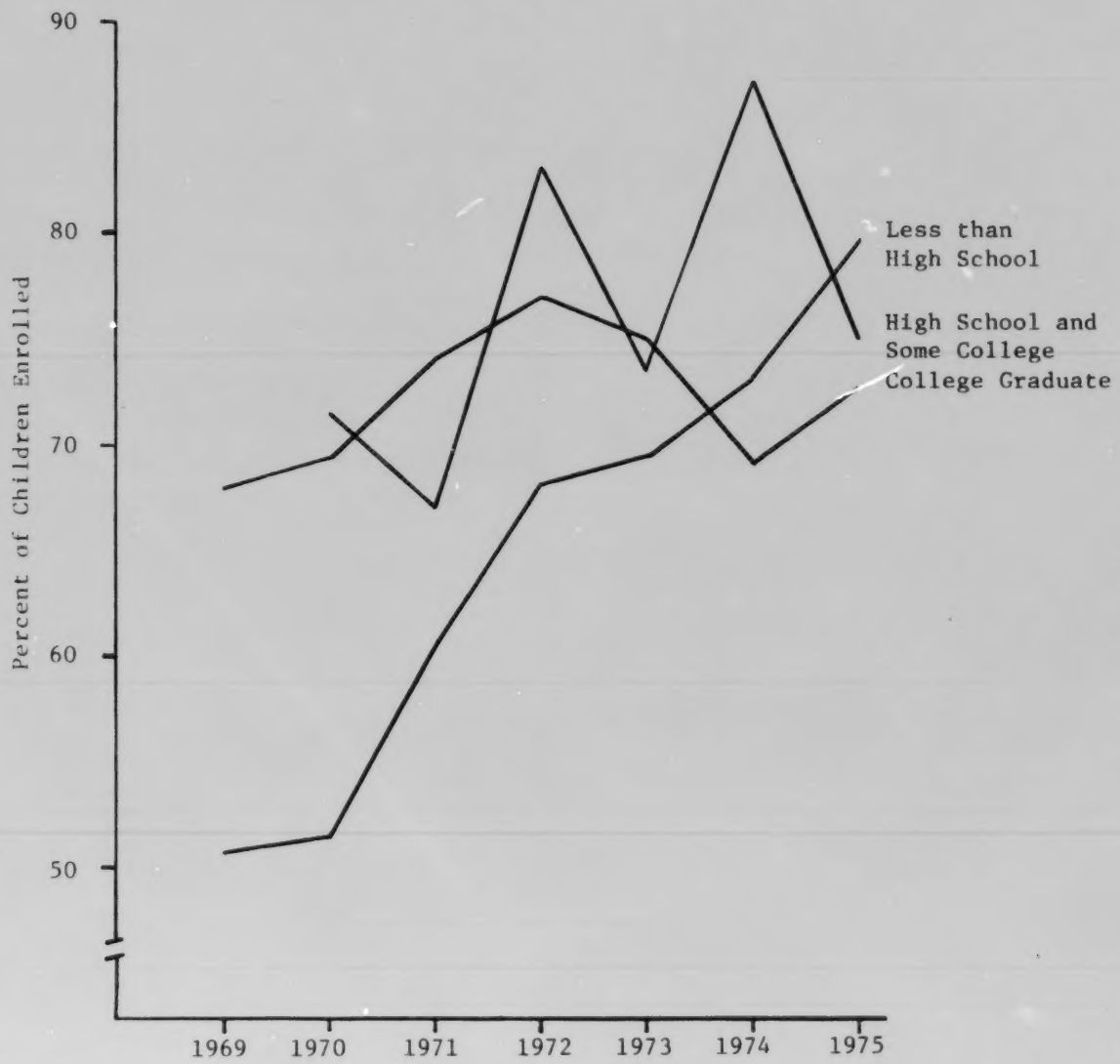
For White children, enrollments are generally differentiated by the educational level of the child's head of household. Children whose parents have less than a high school education are less likely to be enrolled in preschool than children whose parents are of higher educational levels, but there is little difference between the children of college graduates and those with only some college. For 5-year-old Blacks, the relation between parental education and enrollment rate is reversed, 79 percent of the children of high school dropouts being enrolled in 1975 as compared to only 61 percent of the children of college graduates. This reflects the large increase in enrollment rates of dropout-parented children between 1970 and 1975 (+56%). No other rate for 5-year-olds increased as much and the rate for children of Black college graduates even dropped (Figures 4.10 and 4.11).

Figure 4.10 Preprimary Enrollment Rates of 5-Year-Old White Children by Education of the Head of Household*



*Children with no household head not included.

Figure 4.11 Preprimary Enrollment Rates of 5-Year-Old Black Children by Education of Head of Household*



*Children with no household head not included.

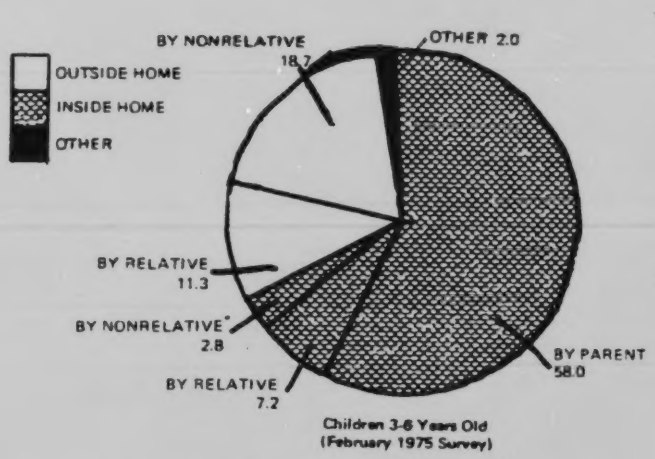
4.4.6 Preschool Enrollment and Mother's Work Participation

The increase in labor force participation among mothers of preschool children (now 37% of all married women with children under six) is often cited as a reason for the tremendous increase in enrollment rates of 3- to 5-year-old children. This is because school enrollment of young children is often equated with the child care arrangements made by mothers who are working. Some relationship clearly exists between preschool enrollment, the need for child care, and more mothers working, but the data show that this is not a straightforward or simple relation. More women with young children are working. The proportion of all children in preprimary programs has increased. But how closely related are these two phenomena?

The enrollment rate of 3- and 4-year-olds in preschool is higher if their mothers are in the labor force than if they are not (35.2% compared to 28.8% in 1976). (See Appendix D for tables on Women's Work Participation and Preschool Enrollment Rates.) However, enrollment rates of 3- and 4-year-olds substantially increased between 1967 and 1976 even for children whose mothers were not in the labor force, and the increases have been parallel (from 18.1% to 35.2% for children of working mothers; from 12.2% to 28.8% for children of nonworking mothers). This suggests that much of the increase in rates of enrollment in preschool is not directly dependent on the increase in women's labor force participation rates, even though the proportion of those with working mothers has increased.

It is important to restate that school enrollment does not replace other sorts of daytime care, such as day care centers, babysitters, or arrangements with friends or relatives. Figure 4.12 shows that in 1975 only 18.7 percent of 3- to 5-year-old children with working mothers were cared for outside their homes by non-relatives. However, we know that 44.6 percent of children 3- to 5-years-old with mothers in the labor force were enrolled in school. Thus, school enrollment for young children must overlap all areas of the pie chart. Children who attend public school for part of the working day may alsc be cared for in "outside the home, non-relative" arrangements (or, for that matter, by any other of the arrangements mentioned in the chart) after completing a full school day program.

Figure 4.12 Arrangements for Daytime Care of Children 3- to 6-Year-Old with Mothers in the Labor Force



Source: U.S. Bureau of the Census, Status: A Monthly Chartbook of Social and Economic Trends, Washington, DC: U.S. Government Printing Office, October 1976, p. 54.

The proportion of enrolled 3- and 4-year-olds who have working mothers has increased since 1967, but not as much as their representation in the population. In 1967, about 32 percent of 3- and 4-year-olds had working mothers (2.58 million children). Of these 18.1 percent (468,000 children) were enrolled in school. This amounted to 41 percent of the total 1.14 million children enrolled that year. Thus, children with working mothers were considerably overrepresented in the enrolled group. In 1976 about 41 percent of 3- and 4-year-old children had working mothers (2.56 million children). Of these, about 35 percent were enrolled in school (895,000). This amounted to 46 percent of the total 1.95 million 3- and 4-year-old children enrolled, only slightly more than the proportion of children with working mothers in the population. Mother's labor force status seems to have become less important as a determinant of enrollment.

Enrollment for this age group does seem to be related to the mother's time commitment at work. A slightly lower rate of nursery school attendance prevails if mothers work full-time rather than part-time (26% compared to 32%). This is probably due to the difficulty of finding full-day care for children. Since most nursery schools are half-day programs some other form of care must supplement it or the child must be placed instead in full-day child care, which may or may not have an educational program. Children whose mothers work full-time also attend different types of programs when they are enrolled. This relationship will be discussed in the next section.

Enrollments for 5-year-olds seem to be unrelated to mother's work participation. In 1967, the enrollment rate for children with working mothers was 63.5 percent; for those whose mothers did not work, 66.3 percent. By 1976, the rates were almost exactly equal: 81.9 percent for those whose mothers were in the labor force, and 81.5 percent for those whose mothers did not work. In 1967, about a third of all 5-year-olds, as well as a third of the enrolled group, had working mothers. By 1976, this proportion had risen to about 43 percent, but children with working mothers were still represented about equally in the enrolled group and the total population.

Labor force participation rates for White mothers of 3- and 4-year-olds increased 35 percent from 1967 to 1976, while the corresponding rates for Black mothers increased only 5 percent. And this, coupled with larger percentage increases in pre-kindergarten enrollment rates for the children of White working mothers than for Black, implies that the enrollment increase that has occurred for the children of working mothers has been brought about mostly by increases in the enrollment of children of Whites. Approximately 45-50 percent of Black children enrolled in preprimary school have had working mothers since 1967. In contrast, the proportion of White enrolled children with working mothers has increased from 29.5 percent in 1967 to 38.8 percent in 1976.

In 1976, Black 3- and 4-year-old children with mothers in the labor force were slightly less likely to be in nursery school than such White children (23.9% for Blacks, 26.2% for Whites), although when total 3- and 4-year-old attendance is considered, Blacks have consistently out-enrolled Whites. This is a tantalizing finding, for it may mean that although public programs for poor Black children are available and highly utilized by eligible children,

once mothers enter the labor force either these programs are no longer convenient or children are no longer eligible for them. In spite of the greater number of Black mothers of 3- and 4-year-old children who are working, fewer of these children may be able to participate in school experiences than similar White children.

4.4.7 Summary of Preschool Enrollment Trends

In the years 1964-1975, more and more young children have received from one to three years of preprimary education. Educational experiences are much more widespread for this age group than they were in 1964, and exposure to schooling for 5-year-olds is now nearly equal to that for other elementary age children.

Increased experiences have been shared by both White and Non-White groups but Non-Whites have, overall, increased their participation in educational experiences more than Whites during these years. Having started from lower participation rates than Whites, Blacks have achieved almost parity in the 5-year-old group and Other Non-Whites have the highest enrollment rates. The Non-White 3- and 4-year-olds, who have out-enrolled Whites since figures were first collected in 1964, have continued to do so, and are still ahead of White enrollment rates, though by less than in past years.

Social class variables are also related to preschool enrollments. In general, among 3- and 4-year-olds, children with the highest enrollment rates are those from white collar families and those whose parents are unemployed. Because of the population distribution, White enrolled 3- and 4-year-old children are mostly from white collar families, while the largest group of Black enrolled children are those whose parents are unemployed. Five-year-old enrolled children reflect the composition of the total population. Children whose parents are more highly educated are generally more likely to be enrolled, although this relationship is stronger for White children than for Blacks. Both occupation and education of the household head are more important determiners for enrollment of 3- and 4-year-olds than for 5-year-olds. Five-year-old children in all social class groups have access to free public kindergartens, and are more likely than 3- and 4-year-olds to participate in a preschool experience.

Three- and 4-year-old children with working mothers are somewhat more likely to be enrolled than those whose mothers do not participate in the labor force. However, the increases which have occurred in preschool enrollments cannot be attributed to increases in the labor force participation of women with young children.

4.5 Public and Private Preschool Enrollment with Part-Day and Full-Day Programs

The enrollment data which have been collected by the Census Bureau allow a gross characterization of program types in terms of control (public or

private) and duration (half-day or full-day). Even though these dimensions describe programs only in the roughest sense, it is still important to know which programs different groups of children are most likely to attend.

4.5.1 Preschool Enrollment of Three- and Four-Year-Olds In Public and Private Schools

Preprimary enrollment rates for 3- and 4-year-old children have increased in both public and private schools. The increases almost perfectly reverse each other for Whites and Non-Whites. The majority of Non-Whites are in public programs, the majority of Whites are in private programs.

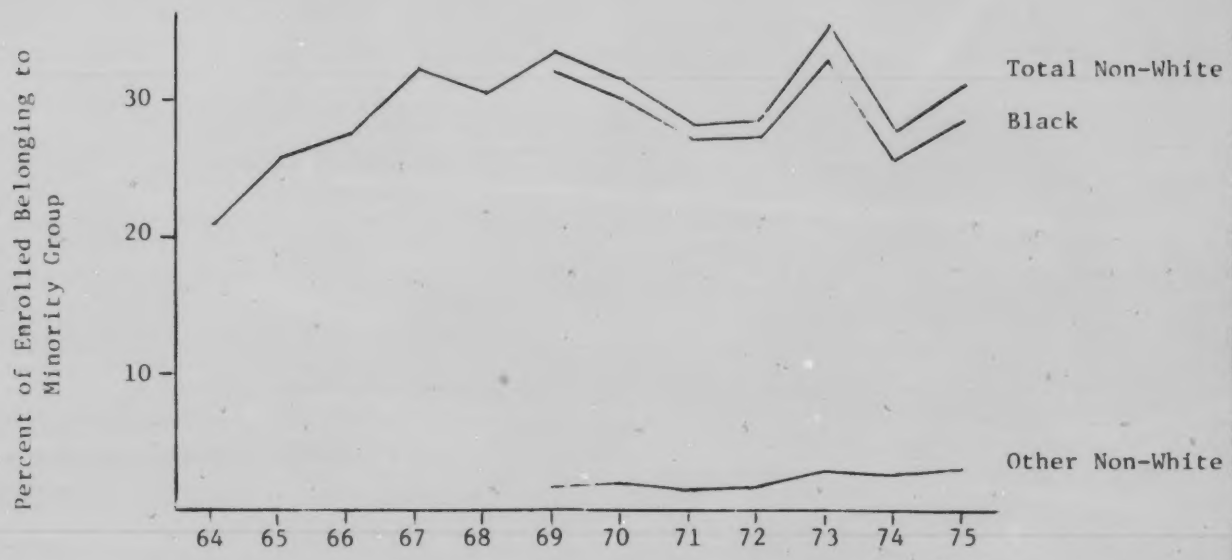
Public enrollment has been consistently greater for Non-Whites than for Whites. The rate of Non-White enrollment in public preschool has quadrupled since 1964 (from 5.9 to 22.8%). The White enrollment rate in public programs increased about two and a half times in the same period (from 4.0 to 10.4%). The advent of publicly financed programs for low-income inner-city children in the mid-sixties accounts for much of the increase in the Non-White public enrollment rate. Since 1969, the rate of increase for Black enrollment has been somewhat less than for Whites. Enrollments have increased about 70 percent for Blacks (from 14.0 to 23.7%) while the public enrollment rates for both Whites and Other Non-Whites have doubled (from 5.3 to 10.4% for Whites; from 7.1 to 17.1 for Other Non-Whites).

In private schools, Whites enroll 3- and 4-year-old children at a higher rate than Non-Whites, although still not as high as Non-Whites in public preschool. White private preschool enrollment rates have increased about 3.8 times (from 5.3 to 20.4%) since 1964. Non-White enrollment rates have increased 2.7 times in this period. Since 1969, Black enrollment rates have grown about 42 percent, the White enrollment rate has more than doubled (from 9.8 to 20.4%), and rates for Other Non-Whites have more than tripled (from 7.1 to 23.7%).

These trends in enrollment rates can be seen in a different way by looking at the racial composition of the enrolled 3- and 4-year-olds in public and private schools. The racial composition of public programs has varied from about 80 percent White, 20 percent Non-White in 1964; to approximately 2/3 White, 1/3 Black in 1969 (with advent of publicly financed programs); to a split of about 70 percent White, 30 percent Black in 1975 (Figure 4.13). Private schools are overwhelmingly White and have maintained approximately a 90 percent White, 10 percent minority population since 1964 (including Black and other races).

Of the total number of 3- and 4-year-olds enrolled in preschool over half are Whites enrolled in private programs. And this proportion has increased since 1964 (from 47.4 to 53.5%). Blacks in private schools have accounted for between 5 and 7 percent of total enrollment, and between 10 and 13 percent of public enrollment.

Figure 4.13 Percent of 3- and 4-Year-Olds Enrolled in Public Preschool Programs Who are Members of Minority Groups



In public schools, Non-Whites represent a slightly higher proportion of the enrolled group than they do in the general population because of their higher enrollment rates. This bulge was most apparent from about 1967 to 1969--which corresponds to the initiation of Head Start--when the difference was as much as 5 percent. Before and after that period, the difference between minority representation in the enrolled group and in the total population is 1.5 or 2 percent or less. Whites enrolled in public programs have dropped from 35.8 percent of the total enrolled population in 1964 to 27.2 percent in 1975.

In 1964, 57 percent of the Non-White preschoolers were enrolled in public and 43 percent in private schools (56.7% public, 43.3% private). But by 1966, Non-Whites had shifted overwhelmingly to public programs. Seventy percent of Non-Whites enrolled in public programs and only 30 percent in private. This trend has been maintained since 1970 and has occasionally reached 75 percent public, 25 percent private. Because public preschool enrollment is highly dependent upon economic conditions, through employment and income eligibility criteria, and policy fluctuations, through new program mandates and funding changes, these changes probably reflect increases in the numbers of unemployed workers eligible for public programs and/or policy changes which expanded or contracted available services.

Whites have continuously enrolled more in private programs; however, this pattern has increased markedly since 1964. Whites enrolled in private over public programs a little over half the time in 1964 (by 56.9 to 43.1%). From 1965 to 1968, the proportion was roughly 60 percent private, 40 percent public. Since 1969, the proportion of Whites enrolling in private preschool has grown consistently to 65 percent, and since 1973, nearly 70 percent of Whites have enrolled their 3- or 4-year-olds in private preschools. Thus, the White enrollment is just opposite to Black preschool enrollment.

These findings have significant policy implications. More and more Whites are choosing private tuition-based programs. More and more Blacks choose, or

accept, public programs. This means that a disproportionate number of Blacks continue to be represented in public preschool enrollments (relative to their presence in the total population) and a disproportion of Whites dominate private preschools. As more public and private opportunities for preschool have become available, more racial segregation seems to have occurred.

4.5.2 Preschool Enrollment of Five-Year-Olds in Public and Private Schools

Enrollments have steadily increased in public schools for both White and Non-White 5-year-olds. White public school enrollment rate for 5-year-olds increased from 49 to 69.3 percent between 1964 and 1975. The enrollment rate for Non-Whites in public programs increased from 44 to 66.7 percent. For two years (1972 and 1973) the Non-White enrollment rate surpassed the White enrollment rate of 5-year-olds in public school.

Private school enrollment rates have remained relatively unchanged for 5-year-olds. The numbers in these groups, particularly for Black and Other minority races, are very small. In 1964, 367,000 Whites and 39,000 Non-Whites were enrolled in private school. In 1975, 387,000 Whites and 54,000 Non-Whites were enrolled. The White, private school enrollment rate for 5-year-olds has been about 10 percent of the total population since 1964, the Non-White rate has been between 5 and 8 percent.

The racial composition of the 5-year-old enrollment has remained nearly unchanged since 1964. Public schools accounted for slightly more of the total enrollment of 5-year-olds in 1975 than in 1964 (84% as opposed to 83%). Of this, 70 percent is enrollment by White children. The increase seems to be made up of the increased enrollment by minority children in public schools. Blacks and Other races in public schools have grown from about 12 percent of total enrollment in 1964 to about 14 percent in 1975. In private schools, which enroll about 15 percent of all enrolled 5-year-olds, Whites account for nearly 14 percent and Blacks and Other races comprise less than 2 percent of the total 5-year-old enrollment.

The racial makeup of public schools approximates that of the population at large, while still reflecting the increases in minority and Black 5-year-old enrollment (and population declines) since 1964. The proportion of Whites in public school has fallen slightly from about 87 percent in 1964 to about 84 percent in 1975. Blacks and Other Non-Whites, who accounted for about 14 percent of public school enrollment in 1964, accounted for 16.2 percent in 1975 (of which 14.3% is Black). The proportion of Black public school enrollment of 5-year-olds is slightly less than the representation of Black of 5-year-olds in the country at large, reflecting the slightly lower enrollment rate for Blacks than for Whites. Private schools are 90 percent White, about 10 percent Black and Other races, and have remained so since 1964. Blacks and Whites enroll their 5-year-olds in public school with almost equal regularity. Roughly 90 percent of enrolled Blacks and 87 percent of enrolled Whites are in public schools.

The issue of differences in program control raised for the 3- and 4-year-old group is obviously not salient for 5-year-olds. Most 5-year-olds are enrolled in public kindergartens organized through the public school system, which are available to children in the school district regardless of income or other eligibility criteria (apart from age). The dramatic increase in public enrollment by 5-year-olds from 1964-1975 probably reflects both an increased interest in early schooling on the part of parents and an expansion of available programs offered through state public school systems.

4.5.3 Preschool Enrollment of Three- and Four-Year Olds in Part-Day and Full-Day Programs

Most 3- and 4-year-olds who are enrolled in preschool are in part-day rather than full-day programs. However, full-day enrollment of 3- and 4-year-olds has increased from 24.6 percent of the total enrollment in 1969 to 31.9 percent in 1975. Since full-day programs represent a substantial increase in the amount of schooling to which children are exposed, it is important to know how widespread these programs are and which groups of children are most likely to participate in them. In 1969, 902,000 children were enrolled part-day; in 1975, part-day enrollment was nearly 1.4 million. The number of 3- and 4- year-olds enrolled in full-day programs is small, but the total has more than doubled since 1969; from 294,000 to 671,000 in 1975.

The percentage increase in the number of full-day enrolled 3- and 4-year-old children has been greater for Whites than for Non-Whites during this period, 138 percent (from 180,000 to 429,000) for Whites, 111 percent (from 114,000 to 241,000) for Non-Whites. However, almost half of Non-White 3- and 4-year-olds as a group have been enrolled in full-day programs since 1970. The proportion of Non-Whites in full-day enrollment has increased from 43.7 percent in 1969 to 59.5 percent in 1975. The proportion of Black children enrolled in full-day programs has been even higher (62.8% in 1975). The comparable proportions of the total White enrollment are 19.3 percent in full-day programs in 1969, 25.3 percent in 1975.

The increasing proportion of children in full-day programs means that a smaller proportion are in part-day programs. Part of this shift reflects greater opportunities for full-day nursery school offerings. Of the total 3- and 4-year-old enrollment in 1969, 75.5 percent were enrolled in part-day programs, 68.1 percent were in part-day programs in 1975. For White 3- and 4-year-olds, part-day enrollment has remained stable at about 80 percent of enrolled population, although a slight decline may be perceived since 1974 to around 75 percent. Black 3- and 4-year-olds are decreasingly in part-day programs (55.4% in 1969, 36.9% in 1975).

The increase in the number of children in part-day programs is due entirely to Whites. Black enrollment in part-day programs actually declined 6.3 percent from 134,000 in 1969 to 127,000 in 1975. (Head Start cutbacks could be a major factor in this decline.) White enrollment increased in part-day programs by 67.9 percent from 755,000 in 1969 to 1.3 million in 1975. The result of these shifts is that the racial composition of part-time enrollment is now overwhelmingly White. Blacks made up 14.9 percent of part-time enrollees in 1969, but by 1975 Blacks were only 8.9 percent of this group. In other words, more Black than White 3- and 4-year-olds have moved out of part-day into full-day programs. And more Whites than Blacks have enrolled in part-day preschool programs since 1969.

There also seems to be a relationship between full-day attendance at nursery school, and mother's full-time employment. When Black children with full-time working mothers are enrolled in nursery school (27% of this population) 87 percent are in full-day programs, 13 percent in part-day programs. For White full-time working mothers (25% of whose children are enrolled) 62 percent of the 3- and 4-year-olds who are enrolled attend a full-day, and 38 percent a part-day program.

Among non-working mothers (21% of whose children are enrolled), 85 percent of 3- and 4-year-olds attend full-day programs, 91.5 percent part-day programs. But of the Black children with mothers who are not in the labor force (19.5% of whom are enrolled) 43 percent are in full-day programs, 57 percent in part-day.

4.5.4 Preschool Enrollment of Five-Year-Olds in Part-Day and Full-Day Programs

Five-year-olds are less likely to be enrolled in full-day programs than 3- and 4-year-olds. However, full-day enrollment of 5-year-olds has increased since 1969 from 10.6 to 21.9 percent of the total enrolled. The number of 5-year-olds enrolled in full-day programs increased each year from 293,000 in 1969 to 625,000 in 1975, almost exactly matching the increase in full-day enrollment for 3- and 4-year-olds. The number of 5-year-olds enrolled in full-day programs remained approximately 5-15 percent below the total of 3- and 4-year-olds enrolled each year.

Enrollment of 5-year-olds in full-day programs has increased more for Whites than for Non-Whites. Enrollment rates for White 5-year-olds grew from 8.2 percent in 1969 to 19.4 percent in 1975. Of Non-Whites enrolled, 26.0 percent were in full-day programs in 1969, 35.4 percent in 1975. Thus, the racial composition of full-day enrollment has shifted from about 2/3 White in 1969 to 3/4 White in 1975.

Most 5-year-olds, White and Non-White, are enrolled in part-day programs, although the increasing proportion of children in full-day programs means that the proportion in part-day programs has declined (from 89.3% in 1969 to 78.1% in 1975). The total number of part-time enrolled 5-year-olds has declined since 1969, from 2.46 million to 2.22 million in 1975. This is in part due to a significant decrease in the total population of this age group

during the period. The decline in numbers has been entirely of White children whose enrollment declined from 2.18 million in 1969 to a low of 1.82 million in 1973 and has climbed again to 1.94 million in 1975. Non-White part-time enrollment, on the other hand, declined from 279,000 in 1969 to 240,000 in 1973, but by 1975 had even attained a slight increase over the 1969 figure to 287,000. This holding steady of the Non-White enrollment in part-time programs reflects the much greater participation in these programs by minority 5-year-olds since 1969, because Non-White population has declined during these years. (White population declined 12.8% and White part-time enrollment only 11%, so there is a small increase in participation indicated here, too.)

4.5.5 Summary of Preschool Enrollment in Public and Private And Part-Day and Full-Day Programs

Three- and Four-Year-Olds. It seems clear from the different proportions of children by race who attend public or private full-day or part-day programs that 3- and 4-year-old White and Non-White children are mostly going to different schools. Most minority children go to public schools and attend for longer hours. Most Whites attend private schools and are in half-day programs. On the whole, Black 3- and 4-year-olds receive many more hours of schooling than do Whites. And these programs take place in publicly sponsored, and presumably regulated, settings. How these treatments vary or differ qualitatively, is unknown. Programs, staff qualifications, facilities, cost and other factors may or may not vary consistently or significantly according to

the public/private; full-day-part-day dimensions which are presented here simply in terms of enrollment. One somewhat disturbing element has been mentioned earlier. We find very little evidence of Black children attending the most predominant setting for Whites: the half-day private preschool. This means that much of early education--at least for White 3- and 4-year-olds--take place in a completely racially homogeneous environment.

Although, clearly, preschool opportunities and enrollment itself by Black 3- and 4-year-olds have increased dramatically since 1964 (both with respect to Whites and measured against their own earlier rates), we must realize that the settings in which this schooling takes place are predominantly "compensatory" or otherwise special ones, and that they remain largely outside the mainstream of offerings now serving the large and diversified "market" of preschoolers. This recognition has at least two concomitant parts:

-- public programs for 3- and 4-year-olds continue to bear the responsibility for educating most young Black children, and

-- the private sector has not yet shown strength in accommodating to or attracting a racially balanced mixture of preschoolers to its programs.

The results are, the perhaps unintentional but nonetheless real, separation of 3- and 4-year-old children into racial and economic groups at an early and formative period of their lives.

Five-Year-Olds. Enrollment patterns for Whites and Non-Whites are more similar for 5-year-olds than for 3- and 4-year-olds. Although full-day and public school enrollment is higher for Blacks than for Whites, both groups are growing and the differences are not as large as for 3- and 4-year-olds. The same split is not indicated between public full-day and private half-day programs by race. This is, of course, largely due to the changed organizational setting of school for 5-year-olds. Kindergarten offered through public school systems eliminates the income eligibility criteria for public programs. And almost all eligible children in the population are enrolled.

It is important to note that with kindergarten offerings becoming so widespread, enrollment may no longer be useful as an index to assessing educational experiences. Widespread enrollment is, however, a rather recent occurrence or accomplishment.

4.6 Preschool, Enrollment by Region and Location

Increases in preschool enrollments over the last fifteen years reflect an increased interest in early education. However, parents' wishes for preschool education for their children are limited by the availability of schools and programs. Availability varies considerably by region and type of community in which children live.

4.6.1 Regional Differences in Preschool Enrollment of Three- and Four-Year-Olds

For 3- and 4-year-olds, enrollment rates were highest in the West and Northeast. The South and North Central regions had somewhat lower overall enrollment rates--reflecting perhaps the larger concentration of farm population and non-metropolitan areas in these states. The South and North Central regions enroll somewhat more Non-White 3- and 4-year-olds in preschool than is their proportion in the population of the region. Other regions approximate the same proportion of Non-Whites in school and in the population of the region. However, the regions outside the South show similar patterns of enrollment increases, and the differences among them are quite small.

It is important to keep in mind the population characteristics of each region. For example, the South has significantly more 3- and 4-year-old children and many more numbers of enrolled children than any other region. Also, over half of the Black population of 3- and 4-year-olds reside in the South. This means that more Blacks in each group live in the South than in the other three regions combined. About 98 percent of Non-Whites are Black in the South; about 93 percent in the North Central region; and 90 percent in the Northeast. The West presents a different picture; not only is the total number of Blacks very low, but the proportion of Blacks in the Non-White group varies from about 42 percent to over 67 percent between 1969 and 1975. Thus, each percentage point increase of Black enrollment in the South represents much

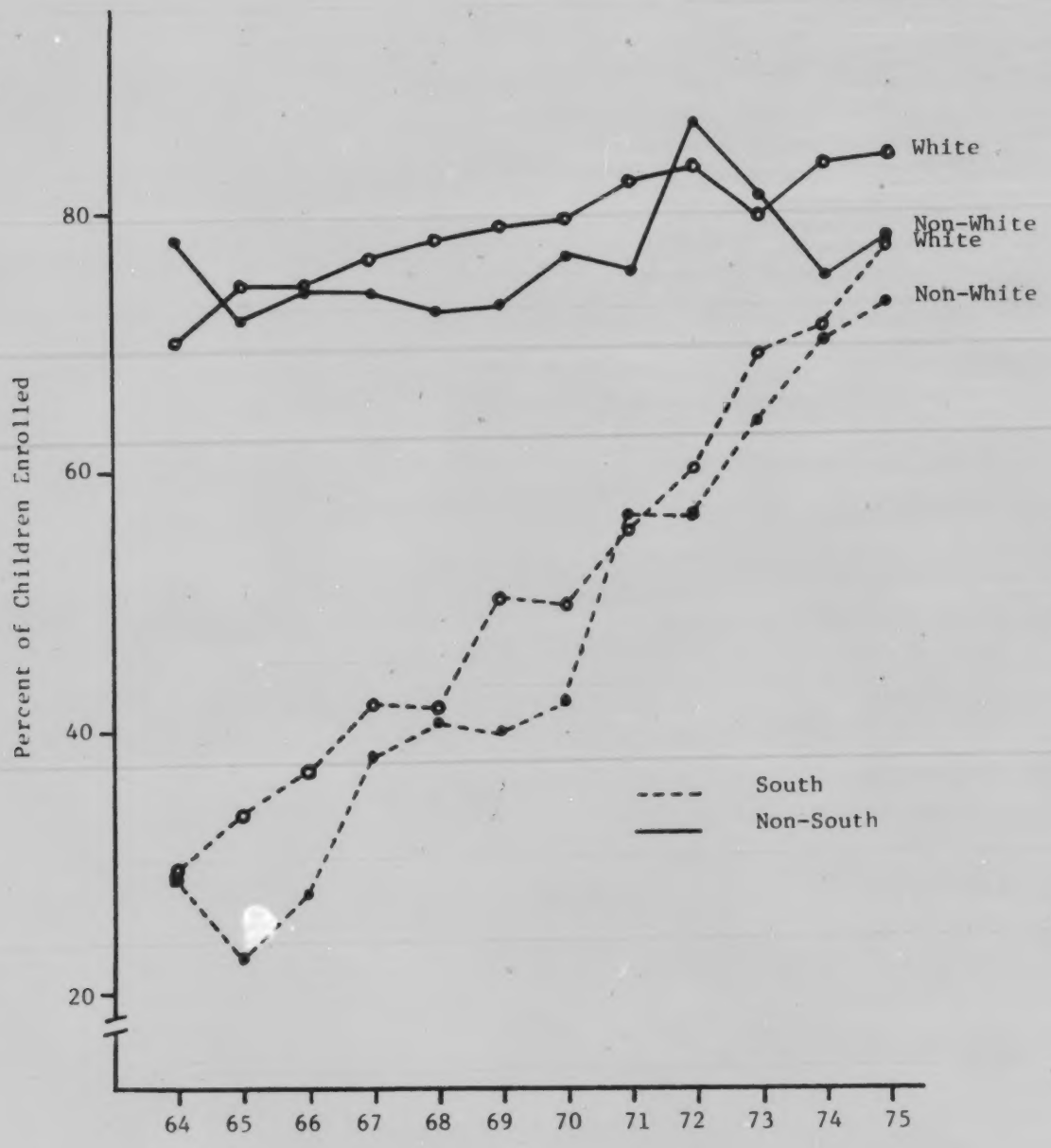
greater numbers of children (and a greater number of opportunities offered) than in the West. This makes it all the more remarkable that participation in each of the four regions is so similar.

The fact that the proportion and number of Non-Whites (and of children) in the West is lower than in other regions means that a smaller amount of resources and program implementation can make a larger difference in enrollment rates there than in other regions. Therefore, a program like California's Comprehensive Early Childhood Education Plan, begun in 1973, can make an enormous difference in total enrollment in that region.

4.6.2 Regional Differences in Preschool Enrollment of Five-Year-Olds

For 5-year-olds, region has been the most important determiner of preschool enrollment. In 1964, South versus Non-South enrollments were separated by as much as 50 percentage points for Non-Whites, and 40 percentage points for Whites. Since 1964, preschool enrollment rates for both Black and White 5-year-olds in the South have undergone a steep and continuous climb (Figure 4.14). Non-White enrollment rates in the South increased from 27.9 percent in 1964 to 73.2 percent in 1975. White enrollment rates of 5-year-olds grew from 29.5 to 77.6 percent in the same period. The expansion of public kindergarten programs in the South has been the major contributor to this increase in enrollment rates.

Figure 4.14 Changes in 5-Year-Old Preprimary Enrollment Rates by Race and Region, South-Non-South, 1964-1975



Enrollment rates for Whites increased modestly in Non-South regions from 1964-1975, from 70.0 to 84.6 percent. For Non-Whites, the Non-South enrollment rate was relatively steady, beginning with 78.2 percent in 1964 and moving to 78.3 percent in 1975.

Enrollment rates in the South for both Blacks and Whites are approaching parity with the rest of the country. The enrollment rate for Black 5-year-olds in the South was still 12.3 percentage points lower than the White Non-South rate in 1975, and Blacks in the South and Non-South regions are still separated by about 7 percentage points, but continuation of the expansion of new state-supported kindergartens may soon eliminate any significant difference between enrollment rates in the South and those in the rest of the country.

Once again it is important to bear in mind that more 5-year-old children (about 33% of the population) and more Blacks (about 50% of the total) live in the South than in any other region of the country. (Although the proportion of Blacks in the South has fallen from about 53% in 1969 to 48% in 1975.) The increase toward parity of enrollment rates in the South, therefore, means that opportunities have increased for preschool education for an enormous number of the nation's Blacks.

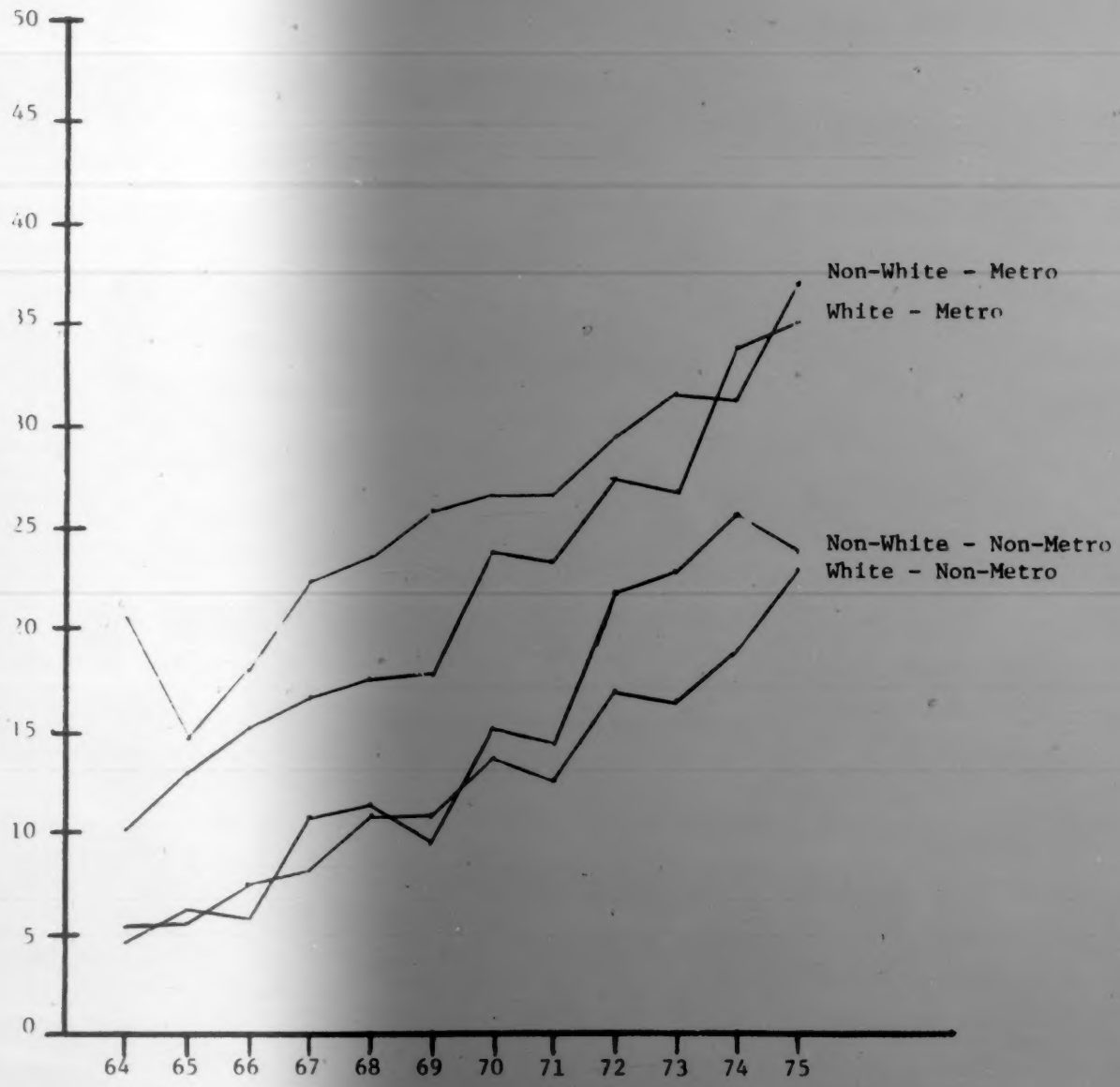
The equalization of enrollment rates by region is not complete, but the expansion of state-supported, public kindergartens in the South since 1964 has done much to increase preschool education for 5-year-old children and to bring it even with the rest of the country.

4.6.3 Differences in Preschool Enrollment for Metropolitan and Non-Metropolitan Residence of Three- and Four-Year-Olds

Children who live in metropolitan areas (with a population of 250,000 or more) have enrolled in preschool at a consistently higher rate than children outside these areas since 1964, and the difference between total enrollment rates in metropolitan and non-metropolitan areas has widened since 1964. Nevertheless, the total enrollment rates both inside and outside metropolitan areas have increased significantly over these years (from 11.9 to 35.6% in metropolitan areas; from 5.2 to 22.9% in non-metropolitan areas) (Figure 4.15).

Within the metropolitan population, enrollment rates are slightly higher for children who live in suburban areas than for those living in central cities. This is true for both White and Non-White groups. Although the absolute differences are small, the consistently higher enrollment rates for Non-White 3- and 4-year-olds in suburbs ("other Metro") and the extreme growth in those rates are somewhat surprising in light of the concentration of public preschool programs in the central cities. However, these residence patterns are probably confounded with social class. Suburban areas tend to have a high proportion of white collar families, and these families have the highest enrollment rates of any occupational groups. It is also important to remember that relatively few Non-White children live in suburban areas (166,000 in 1964; 232,000 in 1975). Over four times as many Non-Whites lived in central cities as in the suburbs in 1964 and about three times as many in 1975.

Figure 4.15 Preprimary Enrollment of 3- and 4-Year-Old Children by Metropolitan - Non-Metropolitan Residence and Race.



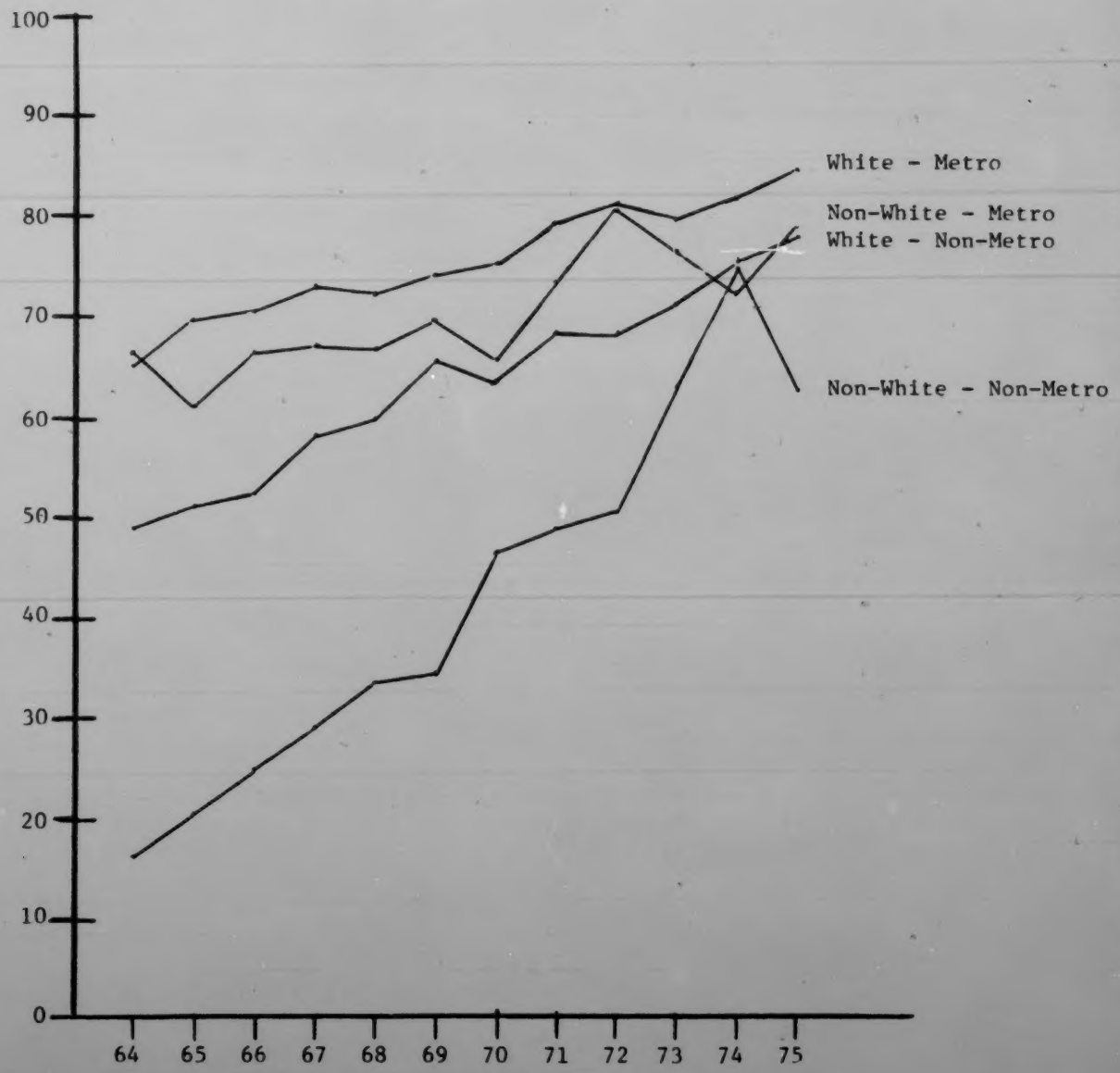
4.6.4 Differences in Preschool Enrollment for Metropolitan and Non-Metropolitan Residence of Five-Year-Olds

Enrollment of 5-year-olds is higher among children who live in metropolitan areas than in non-metropolitan areas, although the gap between rates of enrollment by residence has closed significantly since 1964. The total enrollment rate for 5-year-olds was 22 percentage points higher in metropolitan than in non-metropolitan areas in 1964; it is only 7 points higher in 1975. Much of this gap between metropolitan and non-metropolitan enrollment rates has been filled by the increased enrollment of Non-White children (Figure 4.16).

In 1964, only 16 percent of Non-White 5-year-olds living in non-metropolitan areas were enrolled in preschool, while 49 percent of Whites were enrolled. In 1975, 63 percent of Non-Whites and 78 percent of Whites were enrolled. In metropolitan areas, Non-White enrollment has also remained consistently lower than White enrollment, but the differences have been smaller than in non-metropolitan areas.

The number of Non-Whites (and Whites) residing in non-metropolitan areas has declined sharply since 1964. This makes the sample of Non-White, non-metropolitan children increasingly unstable, and perhaps accounts for the sharp drop in Non-White, non-metropolitan enrollment rates between 1974 and 1975. However, the trend has been for metropolitan and non-metropolitan enrollment rates for both racial groups to converge. Residence is becoming a less siginificant determiner of the enrollment patterns of 5-year-olds.

Figure 4.16 Preprimary Enrollment of 5-Year-Old Children by Metropolitan Residence and Race



Like the rates for 3- and 4-year-olds, enrollment rates for 5-year-olds were slightly higher in suburban areas than in central cities. In 1975, the rates for Whites were 81 percent in central cities and 87 percent in suburban areas. Non-White rates were 78 percent in central cities and 80 percent in the suburbs.

4.6.5 Summary of Preschool Enrollment by Region and Location

In the past, preschool experiences have been less common in non-metropolitan areas than in cities. Kindergarten has been less available in the South than in other regions. However, expansion of kindergarten in the South and in non-metropolitan areas has effected a convergence of enrollment rates for 5-year-olds. Substantial increases have occurred in 5-year-old enrollment rates for both Whites and Non-Whites in the South and for Non-Whites in non-metropolitan areas.

4.7 Preschool Enrollment: Findings and Implications

Preschool education has expanded enormously since 1964. The percentage of 3- and 4-year-olds enrolled reached 31.3 percent in 1976. The corresponding preelementary percentage of 5-year-olds was 81.4 percent, with an additional 10.6 percent in elementary school. Preschools are, to a much larger extent than elementary schools, private. Private funding comes from parents and public funding from a variety of governmental agencies. No one has collected comprehensive data on the total numbers of children involved in each sphere or the total revenues or expenditures devoted to this purpose. We can only

make limited inferences from estimated figures provided for Head Start and other federal programs.

However, we estimate that expenditures for private preschooling can be estimated at twice those of the federal government. The preschool group is profitably differentiated by age, with 3- and 4-year-olds having enrollment and program characteristics distinct from 5-year-olds. Thus, our analyses and projections reflect this differentiation. Black 3- and 4-year-olds enroll more often than Whites in public education. The reverse holds for private education. Surprisingly, programs do not show any regional effects in enrollment, except among 5-year-olds in the South, where Whites have substantially out-enrolled Blacks until recently. These changes reflect increasing kindergarten offerings in the South.

It is surely significant that no state has yet made kindergarten attendance mandatory, although 14 states require their school districts to offer kindergarten classes, and 35 states make such an offering voluntary. Mississippi is the only state not to offer kindergarten in its public schools. Five-year-old Blacks participate in full-day programs to a lesser extent than 3- and 4-year-olds, presumably because free public school kindergartens are, for the most part, half-day programs. This abrupt change surely has consequences for both the learning conditions and child care arrangements of Black children and families.

Social class participation patterns vary for Whites and Blacks. The fact that federally supported programs with income limitations on participation have high Black participation (over 50% in Head Start) implies that a much higher proportion of lower class Black children participate in such programs than White. And because the social class distribution for the Black population is concentrated at the lower end, composition of the Black preschool population is presumably lower class, while the middle class predominates White participation.

Between 1969 and 1976, 3- and 4-year-old enrollment rates for Whites increased more rapidly than those for Blacks. Particularly rapid rates of increase in enrollment were found among White and Black mothers not in the labor force. Enrolled 3- and 4-year-old Blacks and Whites receive different amounts of instruction, with Blacks being primarly in full-day public preschools and Whites in private half-day settings.

Examination of 3- and 4-year-old enrollment figures reveals that in the recent period, between 1969 and 1976, the proportion of Blacks as a part of total enrollment dropped from being 31.8 percent in excess of representation in the total population to being only 10 percent greater. There was a corresponding increase for Whites (from 6% less than the population proportion to 3%). However, children in the Other Non-White group increased from 7 percent excess over population values to 35 percent. This trend may be due to

a drop in Black representation in public programs as private enrollment rates have increased proportionately for both Blacks and Whites.

However, what is the impact of these preschool experiences on the 3- to 5-year olds who participate in them? There is currently great controversy about the timing of early education and its effects. The effectiveness of intervention programs has been as questionable as the issue of program content and organization (Bronfenbrenner, 1974).

Beginning in the 1960's, psychological research findings emphasizing the importance of early childhood experiences for later learning, and simultaneously the growing societal concern about children living in disadvantaged environments, were the main spurs in the growth of Head Start and similar preschool intervention programs. Specifically, reports of short-term IQ gains by disadvantaged children participating in such interventions (Kirk, 1958; Gray & Klaus, 1965; Weikart, Kamii, & Radin, 1964) enhanced political decisions on funding, although early follow-ups showed initial gains quickly dissipating, allowing justification of limitations on further program expansion when political circumstances changed.

Also, the 1969 Westinghouse Head Start evaluation was profoundly negative in its conclusions, reporting no effect or negative effects on achievement for summer Head Start, and a small positive effect for full year Head Start.

Critics then argued that methodological artifacts created biases which falsely reduced estimates of Head Start impact to levels showing the program to be either ineffective or harmful. Recent secondary analyses of these evaluation data (Barnow and Cain, 1977) have demonstrated positive impact, confirming the early criticisms. And most recently, longitudinal studies following up participants in early intervention programs have found long-term advantages in test performance (Lazar, 1977).

Given these findings, it seems highly likely that federal preschool programs have, in fact, reduced performance gaps between Blacks and Whites at entry to elementary school and may have had a significant effect on later school performance.

5. Elementary and Secondary Education

5.1 The Size and Composition of the School Population

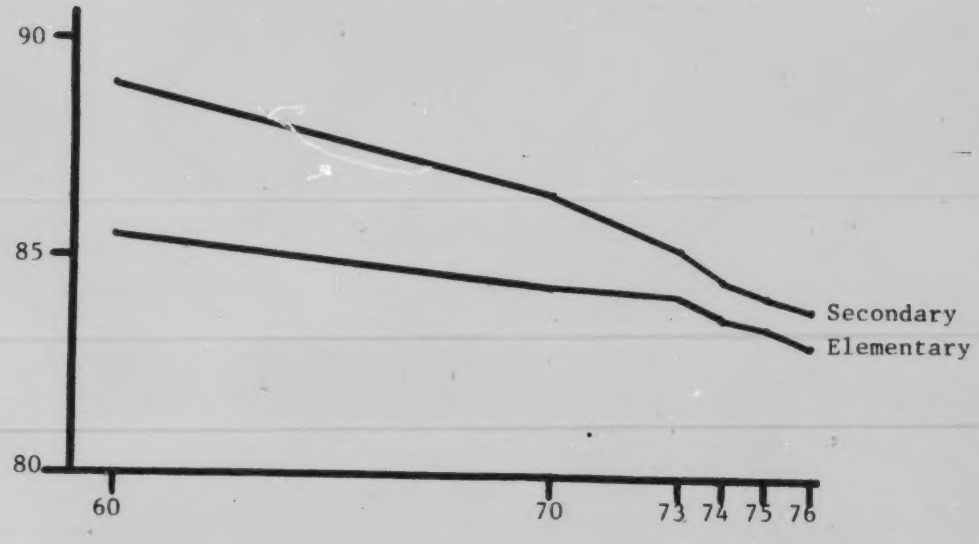
Two highly salient features of American elementary and secondary schools are the declining enrollment and the increasing percentage of Black pupils, particularly in central cities (see Chapter 3).

As a consequence of dropping birth rates, enrollments began to decline in the first grade in 1968/69, in second grade the year thereafter and naturally each succeeding year for later grades. Twelfth grade enrollment will begin to decline in 1979/80.

Nationally, the percentage of Black pupils has been steadily rising. In 1960 Whites constituted 86 percent of the total elementary and 89 percent of the secondary school population (Figure 5.1). By 1976 these percentages had declined to 83 and 84 percent respectively, reflecting both differential birth rates and increased school retention for Blacks.

In fall 1976, about 45.5 million pupils were enrolled in elementary and secondary schools in grades 1 through 12 in the United States (Table 5.1); 83.4 percent were White, including 5.8 percent who were Hispanic. The remaining 16.6 percent were Black and other Non-White children. Ten percent of White, 4 percent of Black and 8 percent of Hispanic pupils in grades 1 through 12 were enrolled in private schools.

Figure 5.1 Percent of Total School Enrollment which is White, by Level of Schooling, 1960-1976.



Source: Statistical Abstract of the U.S., 1977.

About 10 percent of the pupil population was enrolled in schools of the nations twenty largest cities in 1975/76 (Table 5.2). As we have shown earlier (Chapter 2), these 10 percent are overwhelmingly Black. In fact, the minority children in the public schools of these twenty largest cities now constitute over one-third of all minority children enrolled in elementary and secondary schools. It might be noted that while pupil teacher ratios are the same in the twenty largest cities as elsewhere, teacher salaries and per pupil expenditures were substantially higher.

Table 5.1 School Enrollment, Grades 1-12, by Grade Level, Public-Private, and Racial/Ethnic Group, 1976.

Enrollment (1000s)

	White	Black	Hispanic	Total
Total	37,990	6,688	2,866	45,516
Grades 1-6	18,023	3,247	1,454	21,694
7-8	6,753	1,183	480	8,080
9-12	13,214	2,258	932	15,742
Public	34,040	6,443	2,635	41,239
1-6	15,948	3,102	1,336	19,413
7-8	5,999	1,154	432	7,285
9-12	12,093	2,187	867	14,541
Private	3,950	246	230	4,276
1-6	2,075	145	118	2,280
7-8	754	30	47	795
9-12	1,121	71	65	1,201
Percent of Group Enrollment which is in Public Schools	89.6	96.3	91.9	

Source: U.S. Bureau of the Census, School Enrollment - Social and Economic Characteristics of Students, October 1976.

Table 5.2 Comparative Educational Data for the 20 Largest Cities and the U.S. as a Whole, 1975/76.

1975/76	U.S. as a Whole		20 Largest Cities
	Public (ELSEGIS)	Total (CENSUS)	Public (ELSEGIS)
Enrollment - Total	44,838	45,735	4,539
K-8	30,545	31,156	3,147
9-12	14,294	14,580	1,392
Teachers	2,203		222
Pupil/Teacher Ratio	20.4		20.4
Expenditures (Millions $)	67,103		8,412
Expenditures/Pupil ($)	1,388		1,812
Salaries			
Teachers	12,448		15,342
Other Professional	13,967		-

Source: Digest of Education Statistics, 1976.

Below, quality of education, desegregation, federal resources, per pupil expenditures, and staff allocations will be analyzed, for elementary and secondary schools (grades 1-12) in order to answer the question: Have gaps in quality of education for Blacks, Hispanics and other minorities as compared to Whites decreased? The term "gap" is used to refer to Black/White or minority-White disparities in any indices of quality of education.

5.2 Federal Funding Programs Affecting Minorities

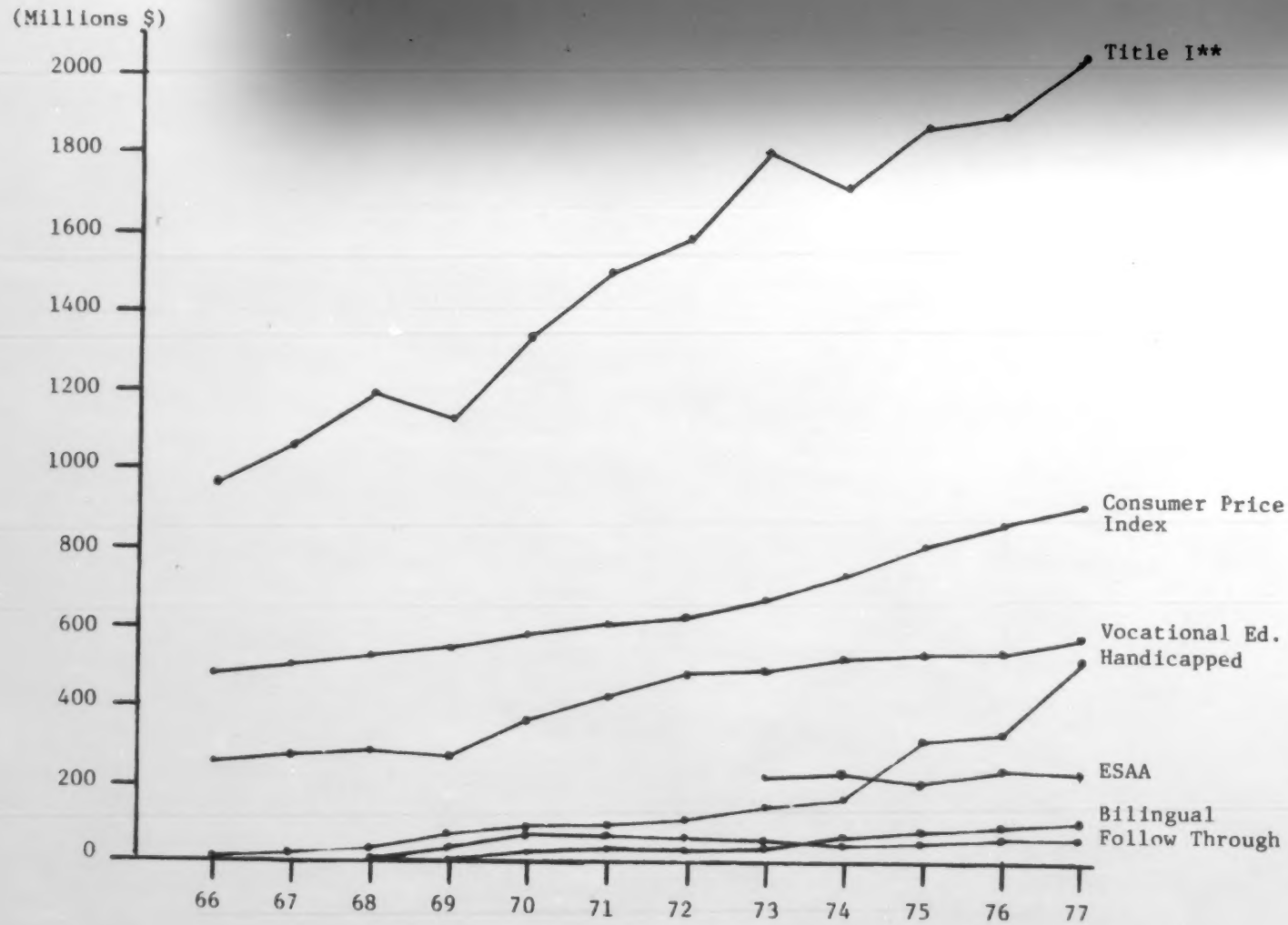
There are eight federal education programs that serve minority pupils--enrolled in elementary and secondary schools--to a greater degree than their representation in the population. Although Congress did not specifically draft legislation solely to aid any given minority group, the specification that funding be directed toward children from low-income families or with non-English-speaking backgrounds, and toward school districts with racially isolated pupils, has resulted in proportionately more resources flowing to minority pupils. In 1978 alone, these programs had appropriations of almost 4.6 billion dollars and if Labor Department and other programs administered outside of the Office of Education were added, the total would be far higher (Table 5.3).

Table 5.3 Appropriations to Federal Education Funding Programs, 1977 and 1978.

Funding Program	Appropriations 1977	1978	% Increase
Title I	2285	2735	+19.7
Bilingual Education	115	135	17.4
Right to Read	26	27	3.8
Follow Through	59	59	-
Ethnic Heritage Studies	2	2	-
ESAA	292	310	6.2
Handicapped	469	693	47.8
Vocational	612	635	3.5
Total	3860	4596	19.1

These resources have increased substantially since the mid-sixties, although in recent years the levels of increase have not greatly exceeded the rate of inflation for any funding program and have fallen short of that rate for most (Figure 5.2).

Figure 5.2 Funding Levels for Major Federal Education Programs Affecting Minorities, 1966-1977*



*Figures for Title I include regular support for local districts, only. Figures for Handicapped include only direct support for the education of pupils.

**Direct grants to school districts, excludes migrant and neglected and delinquent.

Source: U.S. Office of Education, Annual Evaluation Report on Programs Administered by the U.S. Office of Education, 1976.

The six major education programs serve distinctive populations. The following descriptions give the history, intent, and scope of each of these programs, with particular reference to their impact on minority populations.

ESEA - Title I. Title I is a pervasive program to provide financial assistance to LEA's with concentrations of children from low income families. As shown in Table 5.3, it is by far the largest of the federal education funding programs. Altogether, it serves about 68 percent of the nation's elementary schools, 52 percent of all public elementary and secondary schools, and 33 percent of all private schools, as well as 90 percent of all public school districts. About 15 percent of elementary pupils participate, of which about one-fourth are Black and 11 percent Hispanic (Breglio, et al., 1978). All in all, the Congressional Budget Office estimates that 34 percent of all Title I pupils are Black (Table 5.4, CBO, 1977).

Table 5.4 Characteristics of Federal Elementary-Secondary Funding Programs Serving Minority Populations

Program	No. of Pupils Served (Millions)	Percent Black	Per Pupil Expenditure ($/Pupil)
Title I of ESEA	5.61	34	377
Bilingual Education	0.19	0	505
Follow Through	0.08	50	598
ESAA	2.20	40-50	125
Handicapped Education	*	*	*
Vocational Education	16.00	15	38

*Data not available.

Source: Data derived from a variety of sources and years and collated in CBO, 1977. Data for Bilingual Education estimated from OE, 1976.

The objective of Title I was to expand and improve educational programs, primarily in instruction, and strict regulations provide that services must supplement, not supplant, those normally provided by state and local educational agencies. In 1974, during discussions on the Education Amendments of that year, the House Committee on Education and Labor concluded that local educational agencies should give priority

> ....to the basic cognitive skills in reading and mathematics and to related support activities to eliminate physical, emotional or social problems that impede the ability to acquire such skills.

Recent evidence indicates that the number of children being served is declining. It is speculated that this is the result of declining birth rates, or of improved targeting of services and of counting procedures, counting only students in instructional programs, and, importantly, as costs increase, maintaining the same level of services and thus serving fewer students.

Funding for Title I increased rapidly through 1973, greatly exceeding general increases in the cost of living. During the middle years of this decade, however, the level of increase slowed and did not keep pace with the rapid inflationary increases in living costs. In the most recent period (1977-1978, Table 5.3), the Title I budget increased by almost 20 percent and current administration recommendations would bring the 1979 appropriation to almost 3 billion dollars.[1]

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[1]Appendix E contains detailed yearly data on appropriations for the programs discussed in this section.

Bilingual Education. Bilingual Education was enacted in 1968 as a discretionary grant program to provide funds to local educational agencies to develop imaginative approaches to teaching low income, limited English speaking students. In 1974 the Act was extensively revised to encourage the creation of bilingual classes, auxiliary and supplementary community activities, and the training of bilingual teachers. Grants thus go to local educational agencies, state educational agencies and junior and community colleges. FY '76 appropriation was $96 million, of which $69 million was used for classroom demonstration projects and staff inservice, which involved an estimated 190,000 children. Some 44 languages are served in these funded projects. Since Lau v. Nichols 414 U.S. 563 (1974), inaction in the area of bilingual education, especially English-as-a-Second-Language courses, was judged impermissible.

Funding levels for bilingual education increased dramatically in 1975 and current (1978) appropriations have reached 135 million dollars, about 5 percent of the Title I appropriation.

Follow Through. This program was enacted in 1968 to sustain the gains that children from low income families make in Head Start and other preschool programs. Follow Through provides special programs of instruction as well as health, nutrition, and other education-related services which will aid in the

continued development of children to their full potential. Parental participation is stresssed. The experimental nature of the program revolves about roughly twenty educational models in different educational settings with above average supplementary services. Each model has been designed by a university or an educational research laboratory, and implemented by at least one LEA. In addition to the program models, paraprofessionals are trained, and high school equivalencies maybe granted to participating adults. In a few isolated instances, parents have earned teaching certificates.

Follow Through is a demonstration program and has never been funded as a full-scale service program. In 1976, about 76,000 children in grades K-3 participated. Children are eligible only if from low income families, and at least half of the children in any project must have participated in Project Head Start.

Emergency School Aid Act. A third elementary and secondary education program was specifically designed to reach school districts with large numbers of Blacks. In June 1972 the Emergency School Aid Act (ESAA) was enacted with the following purposes: to aid LEA's in eliminating segregation and discrimination against Blacks (and other minorities); to encourage the voluntary elimination, reduction or prevention of Black isolation in elementary and secondary schools with substantial proportions of Blacks; to aid school children in overcoming the disadvantages of Black/White isolation. Two categories of grants under ESAA are state apportionments and discretionary programs. State-apportioned funds may

be awarded to an LEA if it is implementing a desegregation plan, either required or non-required, or if it has a plan to use non-resident children to reduce Black/White isolation. An LEA is also eligible if its Black enrollment exceeds 50 percent and it maintains at least one integrated school. In addition, funds are awarded to LEA's for unusually promising projects designed to raise the academic achievement of children in Black schools. In 1978, $310 million was appropriated for ESAA. About a million Black pupils participated in ESAA funded programs in 1977.

Handicapped Education. The Handicapped Education Act was amended in 1975. It requires LEA's to identify and provide free appropriate public education for all handicapped children, with specific priority to unserved children and then to the most severely handicapped. In addition, it specifies that each child must be annually evaluated and an appropriate program prescribed. Since the incidence of handicapped among low income Blacks is so high, the program is considered here.

The primary services are provided through the State Grant Program, which in 1977 had an appropriation of 315 million dollars. These funds are designed to initiate, expand and improve programs for the handicapped, ages 3-21. In FY '76, 57 non-competitive continuation awards were funded. An estimated 750,000 students were serviced by these funds.

Total appropriations for handicapped education have risen more rapidly than any other federal education funding program since 1974. Total appropriations increased 48 percent between 1977 and 1978 and have now reached $693 million.

Vocational Education. Another program not designed specifically for Black students is vocational education. However, with a FY '77 appropriation of 612 million dollars, and serving an estimated 2,400,000 Black students, the program might easily be considered as the second most important minority education funding program after Title I.

The earliest of the programs to be considered here, the Vocational Education Act of 1963 was established through a series of sections: funds to assist states in providing programs and services for persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational education program (with priority given to areas of high concentrations of youth unemployment and school dropouts); funds to assist states to maintain, extend, and improve existing programs of vocational education and to provide part-time employment for students who need such employment to continue their vocational training; funds to be administered by state boards for research, training programs, experimental programs for the disadvantaged, demonstration and dissemination projects, and state research coordinating units; funds to reduce the continuing high level of youth unemployment;

home economics and consumer programs; cooperative work-study programs; curriculum development. Funding for vocational education has continually risen, but at a lower rate than the cost of living since 1972. Current appropriations are at $635 million.

Federal aid to school districts is the most redistributive to minorities of all sources, as we will discuss in the next section. However, the scope of the programs discussed above is best put in perspective by remembering that in 1974, federal aid to school districts in the United States amounted only to 8.5 percent of school districts' total revenue, while state revenue constituted 41.4 percent and local revenue comprised 50.1 percent.

In the next section, school district financing is discussed in light of the relative significance of the resources flowing to the district from federal, state and local sources. Per pupil total expenditures and per pupil revenues and the way in which they are distributed to districts of varying racial and income composition is the main focus of the discussion.

5.3 School District Revenues, Expenditures and Staffing Patterns

In the original draft of this report, analyses of ELSEGIS finance and staffing data from various years were exhibited and interpreted. Unfortunately, anomalies in the resulting tabulations were found and traced to problems with the sampling weights contained on the files which formed the basis for the analyses. Sufficient resources were not available to carry out remedial actions, the context of this section is omitted from the final report.

(pp. 122-145)

5.4 Desegregation

Few public policy issues in elementary-secondary education have created as much political furor as desegregation. Controversy over the effects of transferring Black--mostly lower class--children into schools which were traditionally White--middle and lower class--has been at the core of the argument. Is the educational climate so changed that majority learning diminishes and achievement drops? The White flight phenomenon seems to indicate that many parents believe this to be true.

In this section we deal with the following issues:

-- How much desegregation has actually occurred to date?

-- Will court pressure for desegregation continue and what will likely be its effects?

-- What is the effect of desegregation on the schools and community when it actually occurs?

-- What is the effect of desegregation on pupils?

Litigation

Prior to 1954, the controlling case in the racial separation of the Blacks for education was Plessy v. Ferguson[1] in which separation of the races in railroad cars was accepted by the Court. This precedent of 'separate but equal' treatment for differing racial groups was declared unconstitutional in Brown v. Board of Education of Topeka[2] in which the Supreme Court concluded that

> ....in the field of public education the doctrine of "separate but equal" has no place. Separate educational facilities are inherently unequal. (347 U.S. at 495)

But this Brown I decision had set no time limit on effecting a remedy, and arguments were requested a year later regarding the manner in which the Court might enforce its holding. A year after Brown I, the Court issued an order that admissions to public schools without discrimination should proceed "with all deliberate speed."[3] (349 U.S. at 301)

Ten years after Brown I, the Supreme Court, reacting to the closing of public schools in Prince Edward County, Virginia, while private state supported segregated schools were being established, decided Black plaintiffs were entitled to immediate relief. In the words of the Court "the time for mere 'deliberate speed' has run out."[4] (377 U.S. at 234)

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[1] Plessy v. Ferguson 163 U.S. 537, 16 S. Ct. 1138, 41 L.Ed 256 (1896).

[2] Brown v. Board of Education of Topeka 347 U.S. 483, 74 S.Ct. 686, 98 L.Ed. 873 (1954).

[3] Brown v. Board of Education of Topeka 349 U.S. 294, 75 S.Ct. 753, 99 L.Ed. 1083 (1955).

[4] Griffin v. County School Board of Prince Edward County 377 U.S. 218, 83 S.Ct. 1226, 12 L.Ed. 2d 256 (1964).

By 1969 the Court ruled, in Alexander v. Holmes, that a lower court had erred by granting some Mississippi school districts more time to implement court-ordered desegregation plans. Rather, the dual school system must be eliminated prior to objections and amendments to court-ordered plans.[5]

Alexander resulted in many conflicting remedies being ordered by lower federal courts. In 1971 the Supreme Court in Swann decided that where the courts were attempting to correct de jure segregation, the effects of actions by school officials should be scrutinized as to their intent to maintain segregation. In addition, the court asserted that not only must the laws supporting dual school systems be abolished, but the most effective desegregation plan must be adopted, even it it entailed busing of students.[6]

The first venture of the Court outside the South was in 1973 in Keyes v. School District No. 1, Denver, Colorado[7] where by a divided vote the Court upheld lower Court findings of de jure segregation in one section of Denver Public Schools, caused by school board decisions regarding school sites and attendance zones.

This decision was of importance because the Court of Appeals had limited the desegregation remedy only to the neighborhood where de jure segregation had been proven. Thus the Supreme Court allowed that proof of official segregation in a substantial part of a city would bring the presumption of segregation

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[5] Alexander v. Holmes County Board of Education 396 U.S. 19, 90 S.Ct. 29, 24 L.Ed. 2d 19 (1969).

[6] Swann v. Charlotte-Mecklenburg Board of Education 402 U.S.1, 91 S.Ct. 1267, 28 L.Ed. 2d 554 (1971).

[7] Keyes v. School District No. 1 of Denver, Colorado 413 U.S. 189, 93 S.Ct. 2686, 37 L.Ed. 2d 548 (1973).

throughout the school system that could be remedied by a system-wide solution. This eased the burden of proof on civil rights groups seeking justice through litigation. The Justices, however, split over whether or not there was a substantial constitutional difference between de facto and de jure segregation.[8]

> We emphasize that the differentiating factor between de jure segregation and so called de facto segregation to which we referred in Swann (402 U.S. 1, 17-18 (1971) is purpose or intent to segregate. (413 U.S. at 208)

By 1974 this distinction became crucial in Milliken v. Bradley,[9] where the majority Justices in a 5-4 split decided that prior to ordering a "metropolitan" solution, that is, involving suburbs in a school desegregation court order where the city has such a high percentage Black that meaningful desegregation cannot be attained, "it must be shown that racially discriminatory acts of the state or local school districts, or of a single school district have been a substantial cause of intra district segregation."[10]

The Milliken decision has prevented meaningful desegregation of Northern cities where school segregation was created by residential housing patterns rather than purposeful governmental action, and where Whites have fled to the suburbs in such numbers that no intra-district desegregation plan offers a remedy.

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[8] Justices Brennan, Stewart, Marshall and Blackmun indicated that in their opinion there was still a constitutional difference between de facto and de jure segregation. Justices Powell and Douglas disagreed with this distinction.

[9] Milliken v. Bradley 418 U.S. 717, 94 S.Ct. 3112, 41 L.Ed. 2d 1069 (1974).

[10] For a detailed explanation of how the Supreme Court majority opinion evolved regarding de jure and de facto segregation and acceptable remedies, see Orfield (1978) especially Chapter 1.

Although optimists cite such post Milliken cases as Louisville, Kentucky[11] and Wilmington, Delaware[12] as instances of interdistrict remedies, they neglect to mention the extraordinary circumstances under which these cases evolved and that neither city can be characterized as Northern. In Louisville, for example, a metropolitan solution became feasible only after the Louisville School Board voted itself out of existance, with the State Board of Education using state law to consolidate the two systems.

Further, where lower court-ordered desegregation plans were in effect, such as in Cleveland, Ohio, the attorneys have been successful in obtaining a stay from Supreme Court Justice William Rehnquist of the lower court desegregation busing plan. Chief Justice Warren Burger turned down a request from the NAACP to convene a special session of the Court to reverse Mr. Justice Rehnquist, and so children will begin school with no changes. The success of Cleveland attorneys has spawned similar requests for stays from Dayton, Ohio, Wilmington, Delaware, Minneapolis, Minnesota and Los Angeles, California.

Thus Milliken leaves us in the uncomfortable position of being unable to effect metropolitan solutions for those city school districts where, like Washington, DC, an intra city desegregation plan would leave all schools 96 percent Black, and of having no effective legal tool to force desegration of de facto segregation.

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[11] Newburg Area Council v. Board of Education of Jefferson County, 510 F. 2d. 1358 6th Circuit (1974).

[12] Evans v. Buchanan 423 U.S. 963 (1975).

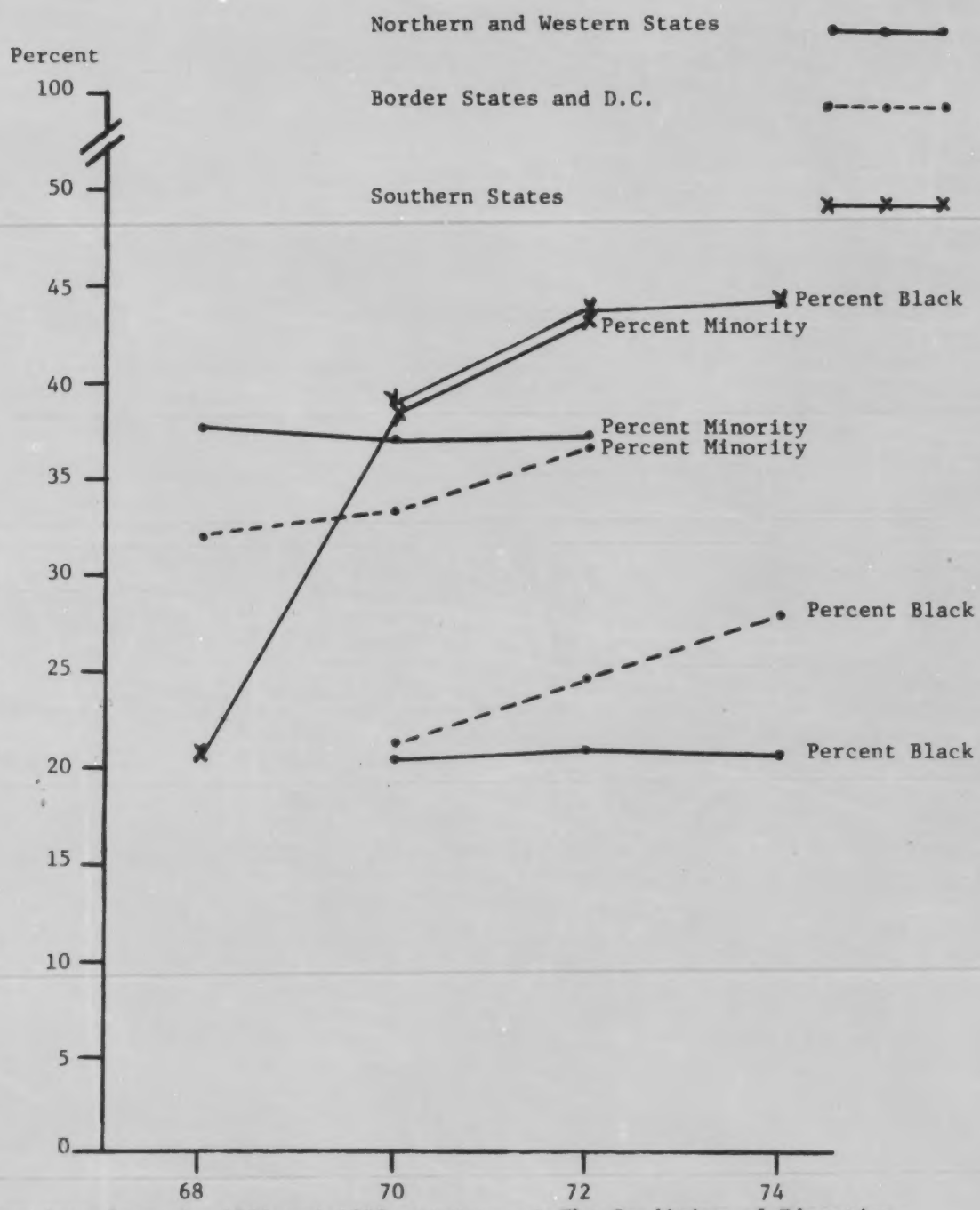
Whether future decisions will expand the prohibited acts that might be considered to constitute de jure segregation, or whether Milliken signals the end of court-ordered desegregation in large, Northern, majority-Black cities awaits the test of time. As Orfield concludes: "Once a school system has become overwhelmingly minority, desegregation policies premised on a White majority or a relatively even population split are nonsensical." (1978, p. 452)

Implementation of Desegregation

The effect of the courts in pursuing and eliminating de jure segregation in preference to de facto segregation created a differential between regions in the extent to which their schools became less racially isolated. Figure 5.9 displays the proportion of total minority and Black students attending public desegregated schools in the South and border states between 1968 and 1972.

In the eleven Southern states, the number of pupils attending 100 percent Black schools went from 57.4 percent in 1968 to 7.3 percent in 1972 (see Appendix I for detailed figures). At the same time, in the 32 Northern and Western states, the percent of pupils attending 100 percent Black schools declined only from 7.8 percent to 6.9 percent, while in the 6 border states and D.C., the percentage went from 23.8 to 21.6 percent. What is particularly interesting is that in the 11 Southern states, the percent attending more than 50 percent Black schools declined by substantial amounts to 1972, while in the North,

Figure 5.10 Percent of Black and Minority Pupils Enrolled in Schools With Less than 50 Percent Minority Pupils, by Region, 1968-1974.



Based upon data from the 1976 and 1978 editions of The Condition of Education (Golladay, 1976, Golladay and Noell, 1978), p. 214 and p. 70 respectively.

West, and border states only slight change took place. Figure 5.10 shows that between 1970 and 1974, the number of minority students attending 0-49 percent minority schools in the North actually declined from 21.2 to 19 percent, while that percentage increased elsewhere in the nation. Similarly, the number of Blacks attending 90-100 percent Black schools in the North increased, from 52.5 percent to 57.8 percent, while it declined elsewhere in the nation.

Table 5.5 shows the 50 largest school districts in the country in 1970 and their degree of racial isolation between 1968 and 1972. The total percent of Blacks increased in all but four districts. However, eleven systems show an increase in the number of 90 percent Black schools, and only four of these two in Maryland, one in D.C., and one in Missouri, are outside the South. Thirty-nine, of which sixteen are in the South, experienced decreases in the percent of Blacks attending all Black schools.

In four large cities in 1970, Blacks constituted more than half of the central city population, and only one of those cities is in the South (Washington, DC; Newark, NJ; Gary, IN; Atlanta, GA.

Table 5.5 Number and percent of Black students attending public elementary and secondary schools by level of isolation; 50 largest school districts: Fall 1968, Fall 1970, and Fall 1972

Districts	Number of pupils		Percent black in --								
			Total			0-49 percent minority schools			90-100 percent minority schools		
	Total, 1972	Black, 1972	1968	1970	1972	1968	1970	1972	1968	1970	1972
New York, N.Y.	1,125,449	405,177	31.5	34.5	36.0	19.7	16.3	16.5	52.2	57.9	60.9
Los Angeles, Calif.	620,659	156,680	22.6	24.1	25.2	4.7	5.9	8.1	83.0	83.3	81.4
Chicago, Ill.	553,342	315,940	52.9	54.8	57.1	3.2	3.0	1.7	86.6	89.7	88.6
Philadelphia, Pa.	282,965	173,874	58.8	60.5	61.4	9.6	7.4	6.7	67.1	70.0	75.9
Detroit, Mich.	276,655	186,994	59.2	63.8	67.6	9.0	5.8	7.2	69.0	73.9	73.9
Dade County, Fla. (Miami)	241,809	63,826	24.3	25.4	26.4	12.4	21.7	23.6	80.7	41.9	41.6
Houston, Tex.	225,410	88,871	33.3	35.6	39.4	5.3	8.4	8.8	88.0	73.7	76.6
Baltimore City, Md.	186,600	129,250	65.1	67.1	69.3	7.7	9.4	7.8	78.6	79.2	80.9
Prince Georges County, Md. (D.C. area)	161,969	40,397	15.2	19.9	24.9	56.1	40.8	39.7	20.7	20.2	22.3
Dallas, Tex.	154,581	59,638	30.8	33.8	38.6	2.1	2.7	15.0	87.6	91.4	78.8
Cleveland, Ohio	145,196	83,596	55.9	57.6	57.6	4.8	4.2	4.8	86.0	89.2	90.3
Washington, D.C.	140,000	133,638	93.5	94.5	95.5	0.9	1.2	0.4	94.2	95.0	95.1
Memphis, Tenn.	138,714	80,158	53.6	51.5	57.8	2.6	6.5	7.3	92.7	89.5	81.6
Fairfax County, Va. (D.C. area)	135,780	4,509	2.7	3.2	3.3	100.	100.	100.	.0	.0	.0
Baltimore, Md.	131,987	5,604	3.5	3.8	4.2	100.	100.	94.4	.0	.0	.0
Broward County, Fla. (Ft. Lauderdale)	128,889	29,363	23.8	23.2	22.8	14.5	15.1	83.9	79.7	39.2	8.0
Milwaukee, Wis.	127,986	38,060	23.9	26.0	29.7	12.4	12.2	15.4	63.2	60.4	72.4
Montgomery County, Md.	126,707	8,131	4.0	5.1	6.4	100.	100.	96.3	.0	.0	.0
San Diego, Calif.	124,487	16,492	11.6	12.4	13.2	25.1	32.1	32.5	54.7	46.4	43.7
Duval County, Fla.	113,644	37,100	28.2	29.4	32.6	12.6	25.6	70.4	87.4	54.9	7.8
Columbus, Ohio	106,588	31,312	26.0	26.9	29.4	28.8	25.9	29.4	40.7	45.2	37.0
Hillsborough County, Fla. (Tampa)	107,540	20,367	19.0	19.4	18.9	18.3	23.4	95.9	73.3	49.4	.0
St. Louis, Mo.	105,617	72,629	63.5	65.6	68.8	7.1	2.5	2.5	87.6	82.7	88.8
Orleans Parish, La. (New Orleans)	103,839	77,504	67.1	69.5	74.6	8.8	7.8	4.9	81.2	78.6	75.8
Indianapolis, Ind.	98,076	38,522	33.7	35.8	39.3	22.4	20.5	25.1	57.6	55.6	46.2
Boston, Mass.	96,239	31,728	27.1	29.8	33.0	23.3	18.0	17.8	43.1	52.8	49.9
Atlanta, Ga.	96,006	73,915	61.7	68.7	77.1	5.4	8.6	8.2	90.0	77.9	81.0
Jefferson County, Ky. (Louisville area)	95,782	3,725	3.7	3.6	3.9	73.8	81.0	73.3	26.4	19.0	9.0
Denver, Colo.	91,616	15,729	14.1	14.7	17.2	20.0	44.6	45.5	56.1	37.5	36.0
Pinellas County, Fla. (Clearwater)	90,182	14,313	16.2	16.2	15.9	21.7	45.5	98.9	72.1	20.0	.0
De Kalb County, Ga. (Decatur)	86,963	8,412	5.3	6.3	9.7	44.6	70.5	51.2	47.0	14.7	18.7
Albuquerque, N. Mex.	86,658	2,221	2.4	2.4	2.6	27.6	36.2	41.0	31.4	27.1	18.1

Source: NCES, The Condition of Education, 1975 (Golladay, 1975), p. 171.

This implementation arose not only from Court distinctions regarding de facto and de jure causes of segregation, but also from differential emphasis by HEW in detecting and enforcing Title VI depending upon region and political intervention by Congress or the President. HEW attempted to enforce deferral of federal funds to Chicago because of segregated vocational schools as early as 1965, only to have the President intervene. Senator Stennis' amendment to the 1969 HEW appropriations bill requiring HEW to assign as many staff members to investigate the North as were assigned to the South reflected congressional feeling that HEW's enforcement practices had not been even handed (Center for National Policy Review, 1974). Orfield (1978) asserts that OCR went through goal transformation as a result of political pressure.

> The result was ironic. An agency that had carried out perhaps the most effective drive against racial discrimination in American history grew in size and resources under a hostile administration but had less and less impact on the problem it was designed to solve. By the mid-1970's its principal civil rights goal was to make separate institutions more nearly equal. The vision of the 1954 Supreme Court decision had given way to the doctrine of the 1896 Plessy decision. (p. 281)

Desegregation and Pupil Achievement

Figure 5.11 displays the core social facts behind much of the argumentation concerning the effects of desegregation on achievement. Pupils in each of the racial/ethnic groups under discussion--Whites, Blacks and Hispanics--have lower achievement when they are enrolled in schools with high minority concentrations. To the extent that this phenomenon results from differences in

the school experiences of pupils, moving a pupil into a school with lower concentrations of minority pupils will increase his achievement whether he is White, Black, or Hispanic. The reverse is also true, again to the extent that these achievement differences result from differences in school-based experiences. And that is the political rub. If the phenomenon is both school-based and uniform over racial/ethnic groups, moving minority pupils to majority schools makes them less heavily majority and thus lowers majority achievement while it raises that of the minority pupils.

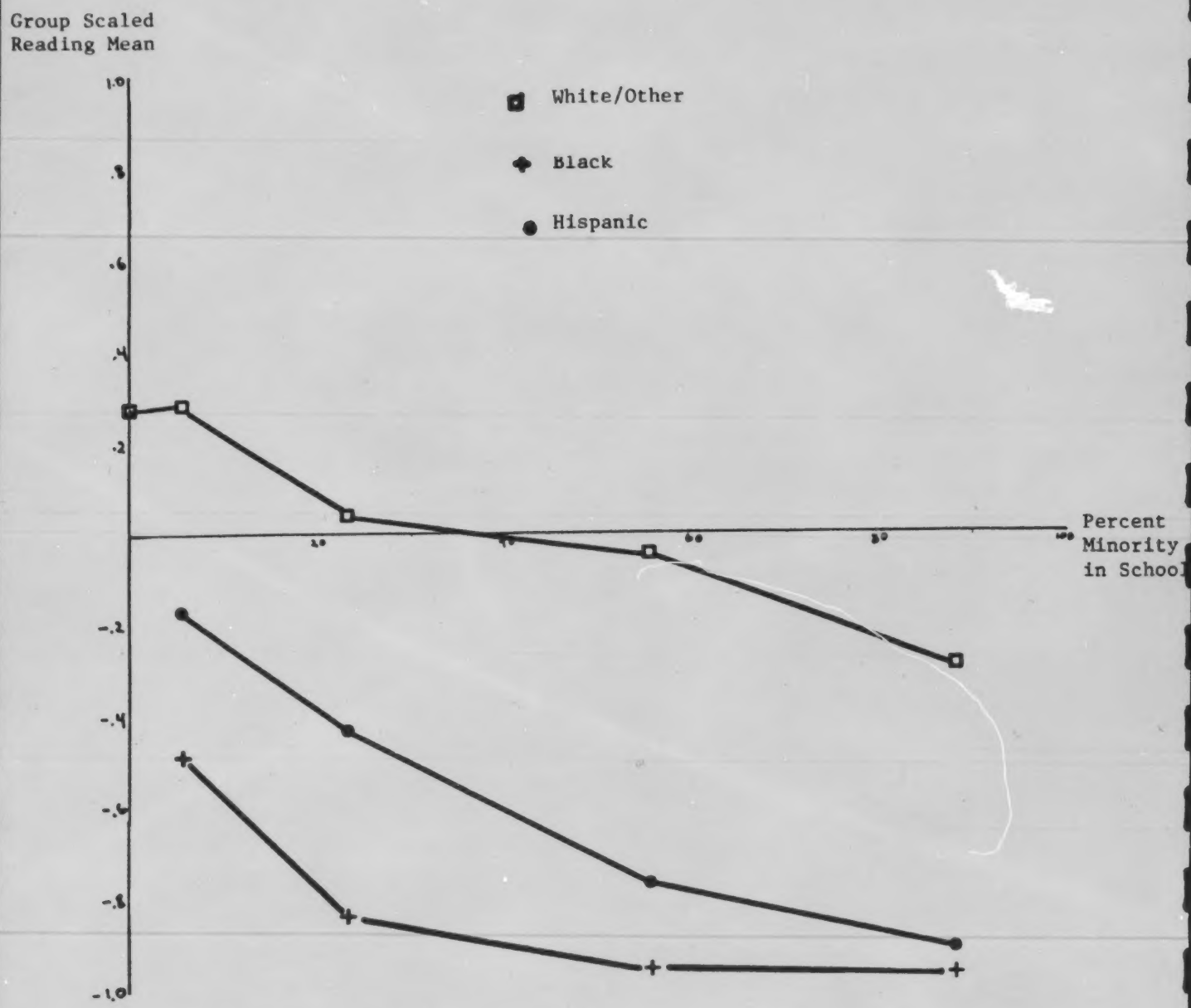
All of this has implied that the social science advocates of desegregation

-- have proclaimed the school-based character of the phenomenon; the so called "context" effect;

-- these advocates have, in addition, tried to establish that it is not symmetric, i.e., in reality it helps minorities, but does not hurt, or can be accomplished so that it does not hurt, majority achievement.

Research on the effects of desegregation, particularly on these "contextual" issues has been missed in political and scientific controversy. Much of the empirical evidence is based on the relation between racial composition and achievement where an attempt is made--statistically--to adjust achievement differences for their known relations to social background, thus allowing the "simulation" or "isolation" of the achievements of children with similar backgrounds in different school settings. Additional effort has been expended, by some researchers, to isolate the peer effects which have been though to be the source of critical environmental influences.

Figure 5.11 Scaled Mean Total Reading Score by Percent Minority of School, 5th Grade, 1972.



Source: Loret, et al., 1974.

One of the first such studies was conducted in conjunction with the Equal Educational Opportunity Survey where a relationship between student body social class and single students' test scores was highlighted. "Attributes of other students account for far more variation in the achievement of minority group children than do any attributes of school facilities and slightly more than do attributes of staff." Thus the inference was that placing a Black child in a higher socioeconomic student body would result in his test scores increasing. Whether this is because his classmates study harder, spurring his own habits, or because students learn predominately from peers, or for some other reason is not clear.

From both conceptual and coverage standpoints, the most complete reviews of desegregation and related research are those of St. John (1975), Weinberg (1977), and Orfield (1978). Weinberg's appraisal is most thorough, in the sense of covering more studies of minority pupils. St. John's is more pointed and analytic in that it is more focussed on desegregation and rests its interpretation on a well articulated sociological and methodological substructure. Orfield's focusses primarily on issues other than effects on learning and attitudes of pupils. There are also differences in tone: Weinberg is more generally optimistic about the short- as well as the long-term effects of desegregation. Our organization of the research findings will follow St. John.

If one phrase could be used to describe what is known about the impact of desegregation on children, it is: diverse and equivocal. Methodologically, research on desegregation is poorer and more problematic than that in any other area relating to schooling and its effects. Selection bias is a serious problem in all studies. The typical level of confounding of race and SES is unusually great. The very definition of desegregation, in all but (quasi-) experimental studies with appropriate comparison groups and pre-post measurement, is subject to conceptual and empirical confusion with racial composition. This is so because desegregation is fundamentally a change and therefore, in cross-sectional studies, inferences of contextual effects are required to conceptually separate the mediating constructs dealing with the social effects of racial composition from the demographic mixture of factors which have their sources outside the school setting (Wiley, 1975).

Basically, the early findings concerning the effects of desegregation can be summarized as follows (question marks indicate data-based speculations, rather than firm findings):

Achievement. Blacks: No evidence of lowered performance, hints of increases in earlier grade (?) and in mathematics (?), but not in verbal performance. Whites: No evidence of systematic effects.

Self-Confidence. Generally, there are somewhat negative effects for Blacks; these, however, may be positive for upper ability males in intermediate grades (?). Severe methodological problems are prominent in the SES controls of most relevant studies and conceptual problems exist in terms of the role of "realism" in Blacks' aspirations.

Prejudice. For early grade programs, desegregation may reduce racial prejudice in Whites (?) and increase it in Blacks (?); the reverse could be true for desegregation beginning in later grades (?). Sociometric choice data in many studies are difficult to interpret because desegregation produces changes in the friendship opportunities of pupils.

In Toto. There are strong situational effects and context interactions. There have been too few continuing studies to systematically extract cohesive long-term findings.

The more recent, large scale evaluation studies, (ESAP, ESAA), can be summarized as follows:

-- ESAP (NORC, 1973). Aided schools showed achievement gains for Black males in high school, but no significant effects for females or elementary school pupils. Integrated and innovative programs involving human relations curricula had positive effects on racial attitude while "basics" and "guidance" focussed programs did not.

-- ESAA (Coulson, et al., 1975, 1976, 1977). In the evaluation of the elementary Basic program, funding differences between ESAA and comparison schools did not become substantial until the third year of the program (33% more total funds in "treatment" schools). At that point differences in both service and achievement levels emerged. The interpretation given to the results was that programs take some time to "mature" to effectiveness and that the resource and service levels actually reaching children need to be carefully accounted.

Neither of these studies, however, directly bear on the effects of desegregation.

Because of these ambiguities of finding and interpretation, the whole idea of context has found its detractors. For example, treating contextual effects as a residual after removal of the demographic composition effects of social background, Hauser (1976) concludes that, at best, high schools' contextual effects could only account for 1 or 2 percent of the variance with respect to students aspirations (either college or occupational) or students' achievement, once one considered the effects of individual social, academic and personality attributes.

Orfield concludes that desegregation has no deleterious effects upon the achievement of Whites. But, he continues, positive effects are not found because of limitations, both methodological and substantive, in past studies (Orfield, 1978, pp. 125-126).

In addition to argumentation over the direct (contextual or otherwise) effects on pupils, attempts to desegregate also provoke a variety of subsidiary effects which are considered undesirable and which have indirect or longer-term impact on pupils. Among those advanced by researchers are White flight from areas undergoing desegregation. The "white flight" issue was first raised by James Coleman (1975), who concluded that Whites were leaving both large and middle-sized cities, and that Whites in big cities were fleeing desegregation. His findings were subject to rancorous debate. Yet reanalyses by Pettigrew and Green (1976) actually acknowledged such an effect, disputing its magnitude and duration, but primarily its importance. Ravitch (1978) has recently continued this argument by disputing findings which have seemed to contradict Coleman's results (Rossell, 1976) using cumulative percentages in changes of number of White students instead of yearly change in the White percentage of the total. All of this controversy has more to do with committment to desegregation on the part of the researchers involved than it has to do with the data.

The Effects of Desegregation

The implementation of desegregation by court order carries with it a variety of consequences that extend far beyond the parameters of the school and the effect upon Black children. The complex mediation between social and psychological factors and their resulting impact is sufficiently convoluted. The separation of one strand of fact and argument from the entire skein can easily mislead. But it is just such court-mandated plans that are the major focus of political debate. Thus, we choose not to consider voluntary desegregation programs, such as Berkeley, California, because they are so atypical compared to the vast resistance shown by the majority of communities to school desegregation plans. Typically, the response to most plans is uniform: Whites, especially, oppose having their students attend another school than the one available locally.

Thus, given a court order to desegregate, or an administrative order withholding funds from a district, the main determinants of how that community will act hinge upon their perception of how much disruption the order to desegregate entails. If high percentages of Blacks are enrolled, if a nearby town has had difficulties with desegregation, or if local officials are opposed, then the district may experience extreme social upheaval and political controversy. These characteristics, in turn, can cause withdrawal of White students

from public schools or increased enrollment in private schools. If resources flowing to the public schools depend upon voter approval of school budgets, or tax initiatives, revenues may decline. Changing ethnicity and lower resources may modify the character of the teaching staff. Violence and vandalism may increase, in perception or reality, with a concomitant reduction in average daily attendance which may lower state aid. These changes in resources also affect the school environment--surely in a negative fashion--so that even if the contextual effects are beneficial, the total impact of desegregation on achievement, in the long- as well as short-run, is an unknown composition of positive and negative effects.

So after almost 25 years of desegregation and desegregation research we find ourselves with

-- increasingly high concentrations of Black pupils in urban areas, making intradistrict desegregation difficult or impossible with concommitant court decisions which make metropolitan desegregation moot;

-- no evidence of any substantial accomplishment of desegregation outside the South;

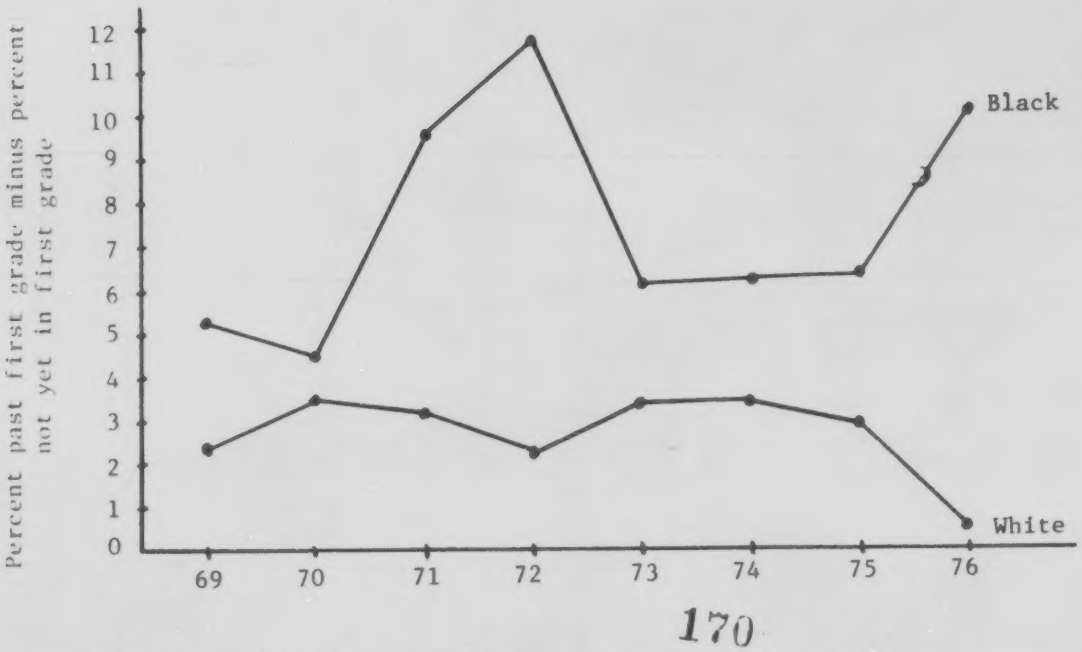
-- substantial political turmoil accompanying new attempts at desegregation;

-- no scientific or political consensus of the meaning of the core social facts, i.e., the fact of lower average achievement of all racial/ethnic groups in schools with minority concentrations.

5.5 Enrollment and Progression Through Elementary and Secondary Schools

Black children begin elementary school earlier than Whites. In 1969 about 11.2 percent of Black 6 year olds were already beyond first grade and only 5.9 percent were not yet enrolled or in preelementary schooling. The corresponding 1969 figures for Whites were 8.7 percent and 6.3 percent respectively. This entry discrepancy has continued through 1976. Figure 5.12 displays differences between the percentage of 6 year olds beyond first grade and the percentage not yet in first grade. These figures roughly measure the age/grade relation, with higher values indicating earlier school entry and advancement. Note that the Black difference figures are uniformly higher than those for Whites in all years from 1969 to 1976 and may have increased somewhat in 1976.

Figure 5.12 Measures of Age/Grade Relation for Black and White 6-Year-Olds, 1969-1976.



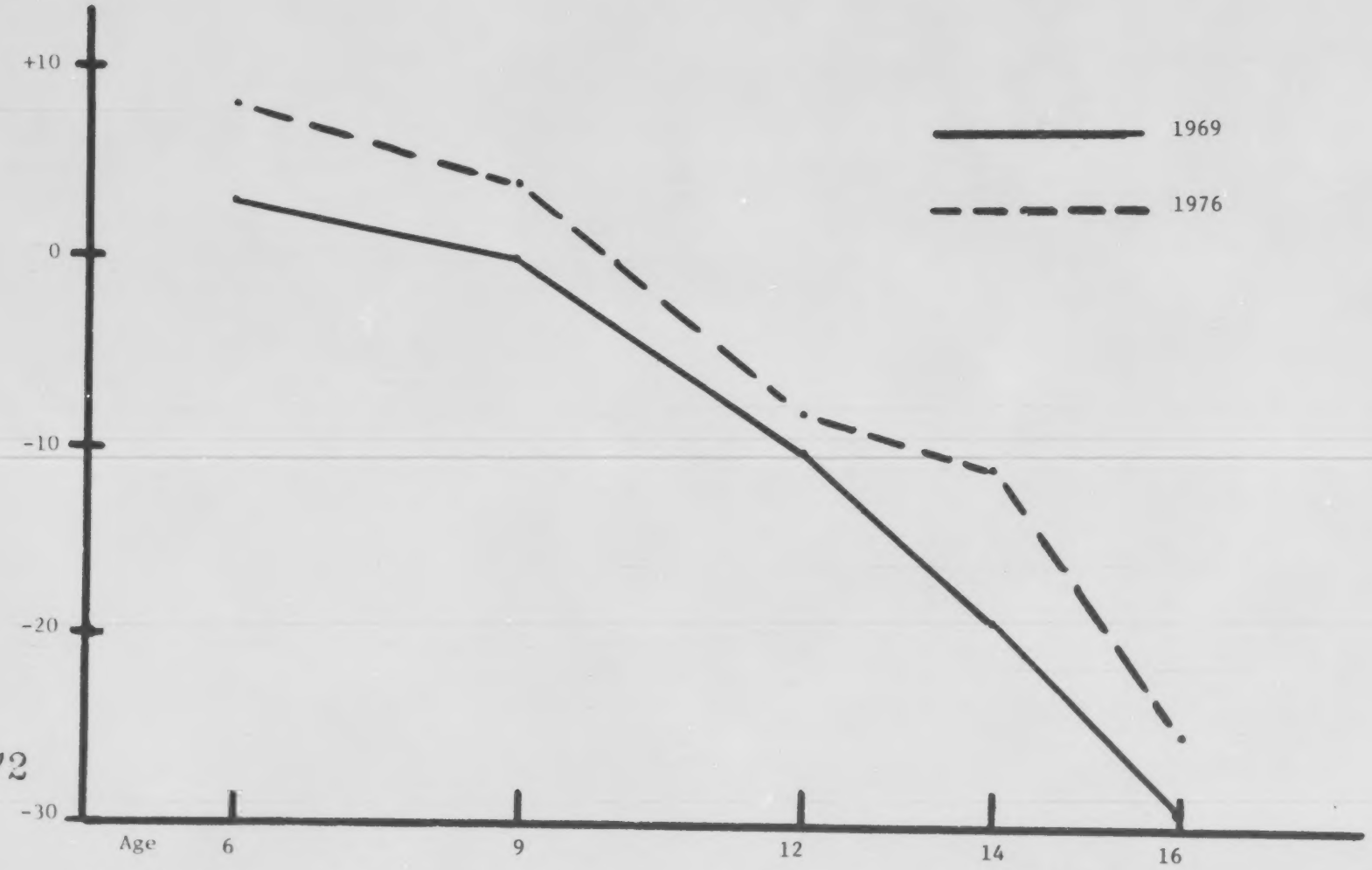
Source: School Enrollment-Social and Economic Characteristics of Students: October 1976. Current Population Reports, Series P-20 (U.S. Bureau of the Census, 1978).

The difference in age/grade relation between Blacks and Whites changes systematically as children become older. Figure 5.13 displays the differences in median grade between Black and White children of various ages in 1969 and 1976. The positive values for 6 year olds indicate the earlier entry of Black children. However as the children progress through the sytem, Blacks steadily lose their advantage drawing even with Whites at about age 9 (1969) or 10 (1976) and then dropping behind. By age 16, median grade placement for Blacks is about 30 percent of a grade lower than that for Whites.

Why does this systematic retardation occur? One obvious explanation is that Black children are more frequently retained in the same grade for more than one year. Table 5.6 displays the percentages of enrolled White and Non-White 14 to 17 year olds still in elementary school and 5 to 13 year olds already in high school. These data reveal a trend toward automatic promotion for both White and Non-White pupils, and a reduction of the gap between retention rates for these two groups.

For the past ten years, Black children have enrolled in school to the same extent as Whites. Proportionately, in 1966, about 2.6 times as many 10 to 13 year old Blacks were not enrolled as Whites (1.8 percent vs. 0.7 percent). This ratio dropped to 1.6 in 1967 and has been about 1.0 since that time.

Figure 5.13 Grade Retardation of Blacks vs Whites (Median Grade for Blacks minus that for Whites, by Age, as a Percent of a Grade).



Source: School Enrollment-Social and Economic Characteristics of Students. Current Population Reports, Series P-20 (various numbers).

Table 5.6 Automatic Promotion Hypothesis

	1960	1970	1973	1974	1975	1976
Percent of enrolled 14 to 17 year olds still in elementary school						
White	8.1	7.0	6.0	6.5	6.6	5.5
Black/Other	22.1	14.6	11.3	11.4	10.5	10.4
Percent of enrolled 5 to 13 year olds already in High School						
White	2.1	1.1	1.2	1.2	1.1	1.0
Black/Other	1.2	1.2	1.3	1.2	1.3	1.2

Source: Statistical Abstract of the United States, various years.

In addition to beginning school earlier, Black children are staying in the system longer. In 1969, by age 16, 7.7 percent of Blacks were not in school as opposed to 6.5 percent for Whites. By 1976, this difference was reversed with only 6.1 percent of 16 year old Blacks out of school, but 7.1 percent of Whites. By age 18, about 40 percent of Black males and over 20 percent of Black females are still enrolled in High School, while the corresponding figures for Whites are less than 20 and about 11 percent respectively. Clearly, Blacks remain in school substantially longer than Whites even given their higher dropout rate.

5.6 Elementary Education

Introduction

This portion of the chapter is devoted to a comparison of national patterns of elementary schooling, schooling received by the major racial/ethnic groups, schooling received by compensatory education (C.E.) students. The first section summarizes offerings and attendance patterns at the national level and by racial/ethnic group. The next section presents a clinical overview of elementary classrooms, followed by data which support this interpretation. The subsequent section focusses on compensatory education--whom it is intended to serve, and how it affects elementary classrooms. Finally, the targeting of CE services and their impact is examined with respect to racial/ethnic group differences. In the remainder of this introduction, we briefly examine the traditional elementary classroom and its organizational structure, with their implications for educational processes and time allocation.

The Traditional Elementary Classroom

In both literature and practice, there is a variety of organizational patterns in the elementary classroom. Team teaching, open classrooms, and departmentalization are among the alternatives to the traditional classroom. Yet the typical elementary classroom is self-contained. A single teacher supervises the same group of 15-40 students throughout the

day and teaches all of the curricular offerings. (Often the arts and physical education are exceptions to this rule, being taught by specialists who serve a number of schools in turn.) Within the 5-6 hour school day, lunch, recess and special teachers' subjects are generally scheduled on a school-wide basis to balance demands on facilities and resources. The classroom teacher schedules the subjects and activities for which he or she is responsible, within the constraints of the larger schedule. Time is allocated to subjects according to the teacher's judgement of what it is important to learn, students' enthusiasm and expressed desire, district/state guidelines, and administrative encouragement (Smith, 1977).

The teacher also plans the instruction to occur during these times. Typically the instruction consists of systematic presentation of textbook content to the students. Often particular texts and materials are prescribed by the district. In other cases, materials are chosen by the individual teacher from those available in the school or chosen by the individual teacher from those available in the school or district. However the materials are selected, the teacher has a great deal of latitude in how she will present them, ranging from independent reading and research by the students, with individual silent reading followed by teacher-led discussion, to lectures by the teacher to the whole class.

In addition to scheduling subjects, choosing materials, and planning their presentation, the teacher must organize pupils for instruction. In most subjects -- mathematics, spelling, English, science, and social

studies -- a teacher typically uses a whole-class organization in which the entire class receives the same instruction at the same time. This is often supplemented, especially in grades 4-6, with independent work on related worksheets or special projects or reports.

By contrast, pupils are typically taught to read in smaller groups. In the primary grades, classes have generally been subdivided into three groups (high, middle, and low "ability") for reading instruction. Groups are established on the basis of reading achievement test scores, the previous year's group placement, and informal observations of the children's reading performance. The teacher attempts to organize the children so that each of the three groups can be instructed using a single text. Each group meets with the teacher each day while the rest of the class works independently.

In the upper grades, there continues to be some ability grouping for reading, but most teachers handle reading with the class as a whole. Teachers who do not subdivide the class for reading instruction use one text for all students and generally give the same assignments to all class members. Where students are grouped in the upper grades, each group may meet with the teacher only two or three times a week instead of daily.

In all grades, students in conventional classrooms work independently at their seats when the teacher is meeting with other small groups. They are generally assigned tasks that require reading and writing, such as

workbook pages and worksheets. About one third of students' time in both mathematics and reading is spent working independently on paper and pencil assignments made by the teacher. In the upper grades, however, teachers more often make weekly or semi-weekly assignments which require children to organize their own time instead of handing in assignments at the end of each period or day.

5.6.1 Educational Processes in Elementary Schooling

The allocation of instructional time to different curriculum areas varies according to grade level. As shown in Table 5.7, the mean number of hours per week devoted to direct instruction in reading decreases steadily from 8.9 in grade one to only 5.2 by grade 6. These decreases are not the same for White and minority students, however. As shown in Table 5.16, White students receive more reading instruction than minority students in the primary grades, but at the upper elementary level more hours are devoted to reading instruction for minority students. In comparison to reading, the amount of time devoted to math changes very little with grade level. At each grade level, the mean number of hours of mathematics offered is smaller than for reading. By grade 6, however, the difference is only 22 minutes, only 9 percent of the four-hour difference at grade 1. While these differences may appear small, they accumulate to considerable differences in the course of a school year. For example, the 3.7 hour per week decrease in direct reading instruction between grades 1 and 6

amounts to over 130 hours of instruction in the course of a school year. Class size, too, varies with subject matter and grade level. In 1976, mean class size was consistently larger for instruction in math than in reading. Reading classes were, on the average, 83 percent of the size of mathematics classes. While both reading and mathematics class sizes increased with increasing grade level (see Table 5.7) the gap between them narrowed from a difference of 5.3 pupils in grade 1 to 2.4 pupils in grade 6. As described above, the predominant organizational pattern in elementary schools is one of self-contained classrooms. Why, then, should class sizes differ for reading versus mathematics? One important factor is the influence of compensatory education programs. As will be described below, many Title I grants are for "pull-out" programs, whereby eligible pupils are taken out of the classroom during certain periods for more intensive instruction in certain subjects. Most of these programs are in reading in the primary grades, hence the smaller reading class sizes and the diminution of the difference between grades 1 and 6.

In 1976, first-grade students spent 40% of their time in reading instruction in small groups (2-13 pupils), and only 13% of their mathematics time in small groups. Reciprocally, 45% of mathematics instruction was in a large group or whole-class setting and only 22% of reading instruction. By sixth grade, this difference between mathematics and reading was smaller. Less reading instruction was done in small groups (25%) and more in the larger settings (32%). The pattern for mathematics remains quite similar across grade levels, with the largest proportion of instruction occurring in large groups.

Table 5.7 Number of Hours Per Week Devoted to Reading and Mathematics Activities By Grade

	GRADE													
	1		2		3		4		5		6		Average	
	Week	Day	Week	Day	Week	Day	Week	Day	Week	Day	Week	Day	Week	Day
Subject														
Reading Activities	8.92	1.78	8.31	1.66	7.14	1.43	6.09	1.22	5.71	1.14	5.17	1.03	6.89	1.38
Mathematics Activities	4.83	0.97	4.89	0.98	5.07	1.01	5.05	1.01	5.03	1.01	4.80	0.96	4.94	0.99

Class Sizes for Reading and Mathematics

	Grade						
	1	2	3	4	5	6	Total
Subject							
Reading Classes	17.91	18.15	19.80	21.88	22.13	24.00	21.52
Mathematics Classes	23.22	23.91	24.66	25.29	25.23	26.38	24.76

Source: Hinckley, R.H., Beal, R.S. and Breglio, V.J. Student's Economic and Educational Status and Receipt of Educational Services. Sustaining Effects Study Technical Report No. 3, June 1978.

A study in 1972 (the Anchor Test Study) estimated that only 18.8 percent of all fifth-grade students were grouped by ability for reading instruction. Analysis along racial lines showed that 26.8 percent of Black students were grouped; among Hispanics, 25.6 percent ability-grouped; and only 16.9 percent of Whites were so grouped. Both Black and Hispanic students were concentrated in the average and below-average groups whereas the largest percentage of White students was in the average group, with equal proportions in both the above- and below-average groups. More frequent grouping is associated with higher concentrations of students in below-average groups and supports Barr's observation that one critical factor in a teacher's decision to group her students for instruction in reading is the expectation that some of those children will have difficulty (Barr, 1975).

National and Racial/Ethnic Patterns in Elementary Schooling

Nationally, the mean school year, across grade levels, is 177.5 days in length. White students are offered a mean of 177.9 days, Blacks, 176.2 days, and Hispanics 175.3 days. The number of days for Whites exceeds the national average only slightly; Blacks receive 1.3 days less than the average; and fewer days yet are offered Hispanics--2.2 days less than the national average. This difference in the length of the school year--number of days offered--is compounded by the varying lengths of school day.

In the discussion to follow, it should be noted that, for each district, length of the day is considered to be constant for all students in that district. The figures for length of day are weighted averages, calculated using racial/ethnic group enrollments in the sampled districts (i.e., Black averages based on Black enrollments, etc.). Thus the length of the school day in districts with no minority enrollment does not enter the averages for either minority group.

Table 5.8 illustrates that the number of hours per day differs substantially by grade and by race. Kindergarten children attend the shortest day, since Kindergarten is generally a half day program. The mean day for Blacks is 3 hours and 54 minutes -- longer than the 3 hours 33 minutes for Hispanics, which in turn is longer than the 3 hour 17 minute day for Whites. The most dramatic increase, of course, is from the 1/2-day Kindergarten to the full-day 1st grade. The largest increase (1 hour 49 minutes) occurs for Whites, resulting in a mean length of day larger than for either Blacks or Hispanics. By grade 6, the mean length of the day increases to 5 hours and 28 minutes for White and Hispanic students, and 5 hours 32 minutes for Black students, a difference amounting to about 12 hours of grade 6 instruction in the course of the school year. Another significant increase occurs between grades 6 and 8. Here the largest increase is for Whites (23 minutes), while the increases in length for Black and Hispanic days are 15 and 14 minutes, respectively.

Table 5.8 Mean Length of School Day in Minutes at Selected Grade Levels, by Racial/Ethnic Group

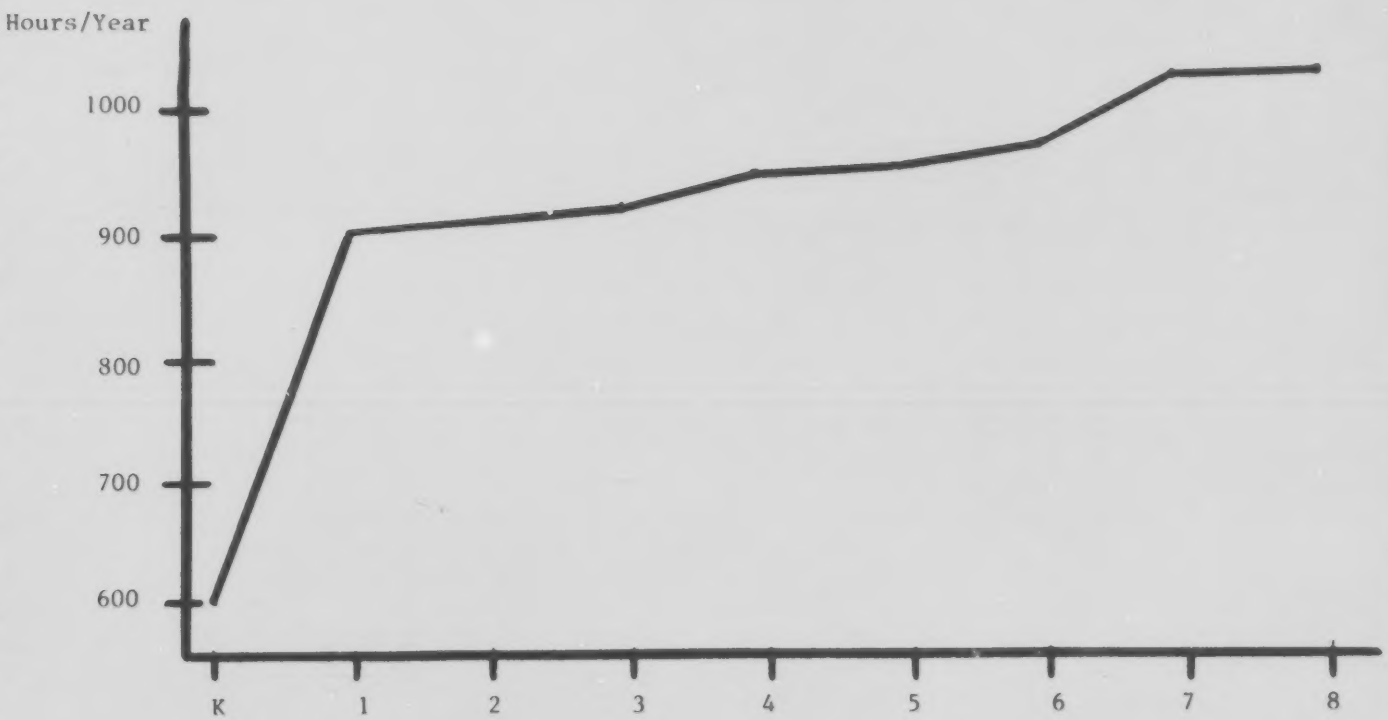
Grade	White	Black	Hispanic
K	197	234	213
1	306	297	292
2	308	314	292
6	328	332	328
8	351	347	328

Source: Unpublished tabulations from the National Institute of Education's National Survey of Compensatory Education. National Opinion Research Center, 1976. (See also National Institute of Education, Compensatory Education Services, July 31, 1977.)

The cumulative effect of differences in both length of day and number of days in the school year is reflected in the amount of time offered students per year. Figure 5.14 illustrates the increase from 601 hours/year in Kindergarten to 1036 hours/year in grade 8. The large jump between Kindergarten and grade 1 represents a 49.8% increase in the amount of schooling offered. Between grades 1 and 6, the increase is gradual and

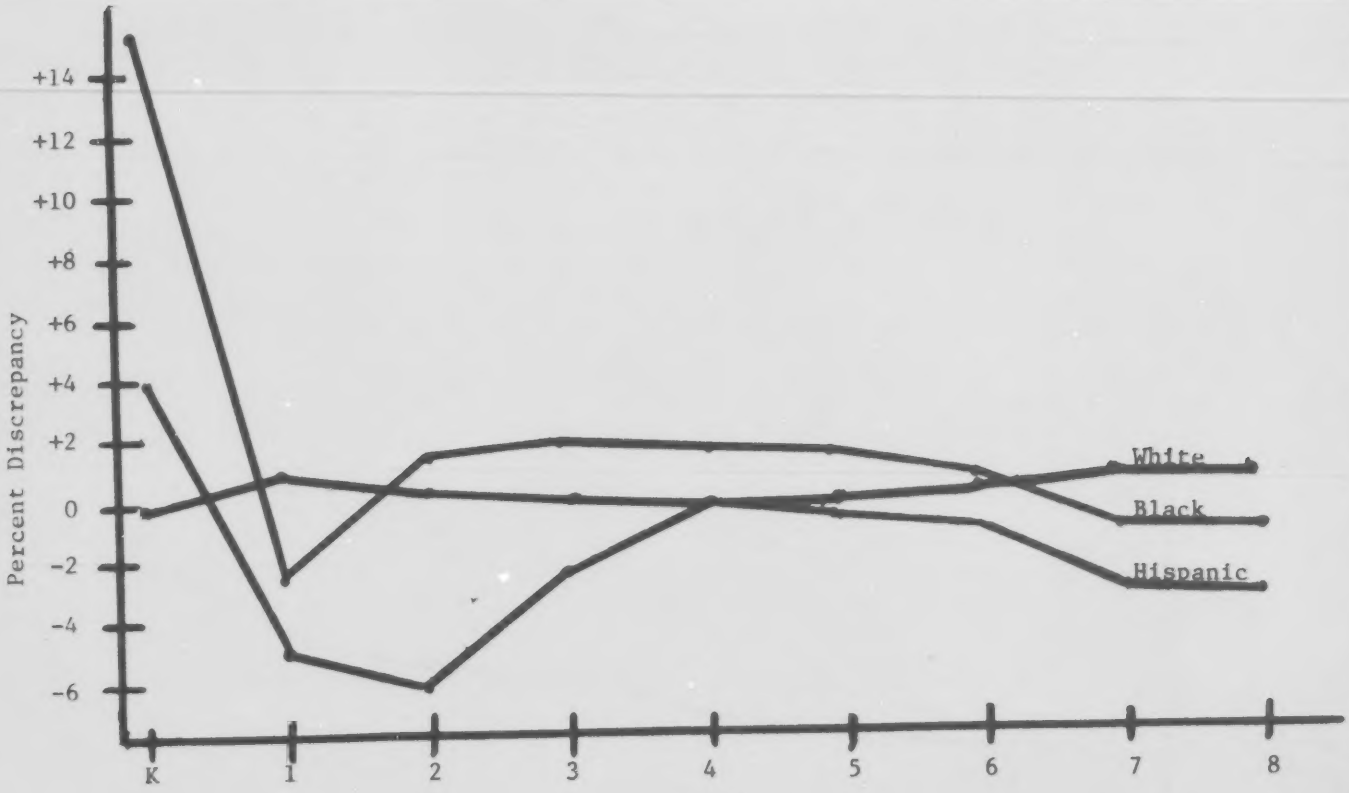
consistent; the 8.1% increase represents an average yearly gain of about 1½%. After grade 6 there is a 6.5% increase in the mean number of hours offered to students. This larger increase likely reflects the fact that many 7th and 8th graders attend junior high schools which are physically and organizationally separate from the elementary school.

Figure 5.14 Total Hours of Schooling Per Year, by Grade.



Source: Unpublished tabulations from the National Institute of Education's National Survey of Compensatory Education. National Opinion Research Center, 1976. (See also National Institute of Education, Compensatory Education Services, July 31, 1977.)

Figure 5.15 Discrepancy Between National Mean Hours of Schooling Per Year and Mean Hours for Blacks, Whites, and Hispanics, by Grade.



Source: Unpublished tabulations from the National Institute of Education's National Survey of Compensatory Education. National Opinion Research Center, 1976. (See also National Institue of Education, Compensatory Education Services, July 31, 1977.)

The number of hours offered to each racial/ethnic group may be examined via an index of discrepancy from the national mean at each grade level. Figure 5.15 displays the percentage by which each group deviates from the national mean number of hours of schooling. Being the largest group in the population, Whites of course deviate least -- are closer to zero -- across all grades. The discrepancy is most pronounced in Kindergarten, where the

difference between the mean number of hours Blacks are offered and the overall mean is 15.2 percent. The discrepancy is +3.9 percent for Hispanics and -3.0 percent for Whites. Hispanics are consistently offered the least schooling in grades 1-8.

To understand students' exposure to schooling, it is necessary to look also at rates of attendance -- the percentage of schooling offered which is actually attended. Table 5.9 displays attendance rates for White and minority students at each grade level. It is apparent from the table that the attendance rate increases between grades 1 and 6. At each grade level, White students attend a larger proportion of the schooling offered them than minority students.

Table 5.9 Percentage of Reading and Mathematics Offered Which is Attended, by Grade Level, for White and Minority Students: 1976-77

Grade	White Students		Minority Students	
	Reading	Mathematics	Reading	Mathematics
1	94.40	94.29	92.80	92.62
2	95.24	95.04	92.93	93.10
3	94.65	94.74	94.29	94.04
4	95.17	95.18	93.17	93.34
5	95.23	95.25	94.34	94.40
6	95.42	94.83	93.93	94.08

Source: Hinckley, R.H., Beal, R.S., and Breglio, V.J. Student Economic and Educational Status and Receipt of Educational Services. Sustaining Effects Study Technical Report No. 3, June 1978.

The amount of schooling offered interacts with the rate of attendance to determine the amount of schooling to which students are exposed. In first grade, Blacks and Hispanics are offered fewer hours of instruction, and the minority rate of attendance is lower than for the nation as a whole. Thus minority first graders are exposed to considerably less schooling than are Whites. In grade 2, level of exposure remains low for Hispanics but increases for Blacks; more hours are offered and rate of attendance increases slightly. Throughout the grades, Hispanics are exposed to less instruction than Whites or Blacks by virtue of the fewer hours offered and a smaller percentage attended. Blacks are offered more schooling than Whites in grades 2-6, but their lower rate of attendance cancels this advantage, making Whites' and Blacks' exposure to schooling quite similar.

Compensatory Education

Compensatory education legislation was designed to channel additional monies into districts and schools serving students from communities defined as poverty-level. These monies were to supplement, and not supplant, the ongoing services rendered by the district to all students. Within the school, CE funds were to be directed toward intensifying the education of those students deemed educationally disadvantaged, i.e., low achieving. The additional money was intended to compensate for the students' low economic status and associated low achievement.

In 1976, about 87% of all public elementary schools were receiving some combination of federal, state, and local compensatory education monies. This funding affects traditional classrooms in several ways: class sizes are reduced; aides are added, reducing the child-adult ratio; students may be seen outside their classrooms by special teachers (Table 5.10).

Table 5.10 CE Services Provided by Public Elementary Schools: 1976-77 School Year

Type of CE Service	Percent of Schools Providing CE Service*
Service provided outside classroom ("pull-out")	81.1
Aides worked with CE students in regular classroom	35.0
Teachers worked with CE students in regular classroom	20.0
Teachers worked with CE students and aides worked with regular students	17.6
Service provided as part of entire class	17.3

*Percents add to more than 100 since many schools provide more than one kind of service.

Source: System Development Corporation. The Nature and Recipients of Compensatory Education. Sustaining Effects Study Technical Report No. 5. Santa Monica, CA: Author, 1978.

The table reveals that the majority of schools provide at least some of the CE services by removing students from their regular classes for instruction -- "pull-out" programs. This reduces class size for at least part of the day, but introduces complications for the teacher in scheduling instruction and seeing that missed work is made up. Class size is also reduced in the 17 percent of the schools which designate entire classrooms to

receive CE services, since smaller numbers of students are assigned to these CE classrooms. In 53 percent of the classrooms, the child-adult ratio was reduced by employing aides, in addition to regular classroom teachers, to work with students. Of course some schools employed a combination of these procedures.

The amount of total instructional time devoted to CE by CE students in each of grades 1-6 is shown in Table 5.11. Roughly one-fifth to one quarter of the CE student's time is spent in CE activities at all of these grade levels. Comparable 1976-77 data categorized by both subject matter and achievement of CE students reveal that CE students who are low achievers in either reading or mathematics spend a larger proportion of their instructional time in CE pursuits than do other CE students (System Development Corporation, 1978). For both regular and low achieving CE students, more time is devoted to reading than to mathematics.

Table 5.11 Available Instructional Time Devoted to CE by CE Students: 1975-76 School Year

Grade	1	2	3	4	5	6
Percent of Total Available Instructional Time	21.50	22.23	21.82	25.05	23.27	20.81

Source: National Institute of Education. Evaluating Compensatory Education: An Interim Report on the NIE Compensatory Education Study. Washington, DC: U.S. Government Printing Office, 1977.

Class sizes for both mathematics and reading are reduced by the added CE funding. Table 5.12 presents overall mean class sizes for both reading and mathematics by type of funding. Similar patterns are seen for reading and mathematics, though reductions in class size are proportionately larger for reading. Title I classes are roughly 15 percent smaller in reading and 7 percent smaller in mathematics than are classes in Non-CE schools. Non-federal CE funding generally reduces class sizes by 7 to 10 percent in both reading and mathematics. In Title I schools, Non-CE students participate in somewhat smaller classes than students in Non-CE schools: roughly 11 percent smaller for reading and 4 percent smaller for mathematics.

The amount of reading and mathematics instruction offered is also linked to the type of compensatory funding received, as shown in Table 5.13. Title I students are offered the most hours of reading instruction (7.77), and CE-selected students are generally offered more hours of instruction than are non-CE students. Further, the amount of reading instruction for primary-grade Non-CE students tends to be greater in funded schools than in schools receiving no compensatory funding.

Title I students are offered the largest amount of mathematics instruction (5.75 hours/week); selected students in state-funded schools are second (5.30 hours)--a mean difference of about 15 minutes per week. Unlike reading instruction, the mean number of hours devoted to mathematics is no larger for non-Title I students in Title I schools than for students in non-funded schools. The smallest number of hours of mathematics instruction (4.7) is offered to unselected students in state-funded schools.

Table 5.12 Mean Class Sizes for Reading and Mathematics by Type of Funding: 1976-77 School Year

	Title I Students in Title I Classes	Other-CE Students in Title I Schools	Other-CE Students in Other-CE Schools	Non-CE Students in Title I Schools	Non-CE Students in Other-CE Schools	Non-CE Students in Non-CE Schools
Reading	19.14	20.28	20.44	19.95	22.28	22.44
Mathematics	23.68	23.36	23.75	24.58	25.57	25.49

Source: System Development Corporation. The Nature and Recipients of Compensatory Education. Sustaining Effects Study Technical Report No. 5. Santa Monica, CA: Author, 1978.

Table 5.13 Mean Number of Hours Per Week Devoted to Reading and Mathematics Activities by Type of Funding: 1976-77 School Year

	Title I Students in Title I Schools	Other-CE Students in Title I Schools	Other-CE Students in Other-CE Schools	Non-CE Students in Title I Schools	Non-CE Students in Other-CE Schools	Non-CE Students in Non-CE Schools
Reading	7.77	7.32	7.16	6.80	6.64	6.39
Mathematics	5.75	4.80	5.30	4.95	4.68	4.91

Source: System Development Corporation. The Nature and Recipients of Compensatory Education. Sustaining Effects Study Technical Report No. 5. Santa Monica, CA: Author, 1978.

Targeting of CE Services

Who are the students receiving Title I and other compensatory services in elementary schools? All in all, one in four pupils in the nation are selected for CE. But because compensatory education is intended to serve students from families with low economic status, and because there is an association between racial/ethnic group and economic status, it is reasonable to examine the CE target population with respect to the selection rates for students in different racial/ethnic groups.

Shown in Table 5.14, selection rates are substantially higher for minority students than for White students. Among different minority groups, distinct patterns emerge. Whereas only 25 percent (100 x 8.6/34.9) of the Black students selected for CE are not designated as Title I program participants, 41 percent (100 x 18.0/44.2) of all Hispanic CE pupils do not participate in Title I. This may be due to concentrations of Hispanic students in New York and California, which fund large state CE programs.

For each racial/ethnic group, the percentage of students selected is higher among poor students. For both poor and non-poor, the group with the highest percentage of students receiving services is the Hispanic. Further, the difference between the percentages of poor and non-poor Hispanics selected for CE services is smaller than for either Blacks or Whites.

Table 5.14 Percentage of Pupils in Grades 1 to 6 Selected for Compensatory Education, by Type of CE, Family Economic Status, and Racial/Ethnic Group: 1976-77 School Year

Family Economic Status	Racial/Ethnic Group	Type of CE: CE Including Title I	Type of CE: Other CE Only	Total
Poor	White	26.1	10.1	36.2
	Black	32.7	8.8	41.5
	Hispanic	28.9	18.2	47.1
	Other	38.4	6.2	44.6
	All Groups	29.4	10.6	40.0
Non-Poor	White	9.4	9.7	19.1
	Black	18.8	8.3	27.1
	Hispanic	24.0	17.8	41.8
	Other	5.2	4.9	10.1
	All Groups	10.7	9.8	20.5
Combined	White	11.6	9.8	21.4
	Black	26.3	8.6	34.9
	Hispanic	26.2	18.0	44.2
	Other	13.7	5.3	19.1
	All Groups	14.6	10.0	24.6

Source: Retabulations of Table II-3 in Students' Economic and Educational Status and Selection for Compensatory Education, SDC, 1978 (Breglio, Hinckley, and Beal, 1978).

In addition to differential CE selection rates, it is important for policy purposes to consider the racial/ethnic composition of the entire CE population. Figures on the proportions of CE-selected pupils in different groups offer some index of the proportion of funds flowing to these groups. Data on the popula-

tions of CE pupils in Title I programs and not in Title I programs are presented in Table 5.15. Large differences are apparent in the composition of these two CE populations. While 25 percent of the students selected for Title I are Black, only 12 percent of the student selected only for other CE programs are Black. Hispanic representation is the same in the two populations.

Table 5.15 Racial/Ethnic Composition of Compensatory Education, by Type, Grades 1 through 6, Fall 1976

Racial/Ethnic Group	CE Including Title I	Other CE Only	Total
White	61.8	75.8	67.5
Black	24.9	11.8	19.6
Hispanic	11.2	11.2	11.2
Other	2.0	1.1	1.7
TOTAL	99.9	99.9	100.0
Percent of CE Population	59.3	40.7	100.0

Source: Retabulation of figures reported in Breglio, Hinckley, and Beal, 1978.

Services

At this point we can examine educational services -- both offered and received -- for differences along racial and economic lines, knowing that at least one source of those differences is the funding for compensatory education. As has just been shown, CE funds are mainly targeted toward minorities. A more complete reporting of racial/economic differences would include an exposition of the role of CE in delivering educational services. Unfortunately, information which details this role of CE is not currently available. Hence this discussion passes on to a general consideration of services to major racial/ethnic groups, acknowledging that these will flow along the lines of the per pupil expenditures reported in Section 5.5, percentage of resources by race.

This discussion will focus on the basic skills since this is the primary target area for CE funding. Information about reading and mathematics are taken from Technical Report #3 from the Study of Sustaining Effects of Compensatory Education on Basic Skills,[1] which is the first report available from a large study linking services to pupils categorized by racial/ethnic group. Later reports from this study may include greater detail about the role of CE in producing differences in services along racial/ethnic group lines.

The amount of instruction offered varies by subject matter, grade, and racial/ethnic group, as revealed in Table 5.16. All groups are offered more mathematics than reading at each grade level, but this difference is most pronounced in the earlier grades. The amount of reading instruction offered to Whites declines steadily from first grade (332 hours per year) to sixth grade (173 hours). In the first grade, minority pupils are offered less reading instruction than Whites: 9 percent less for Blacks and 19 percent less for Hispanics. By the second grade, however, Blacks are offered relatively more instruction, and by the sixth grade their offerings exceed those of White pupils by 17 percent. Hispanics are offered more reading instruction then Whites by third grade. By sixth grade the Hispanic-White differential has reached 45 percent. This probably reflects increased focus on English proficiency for Hispanics.

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[1] Student's Economic and Educational Status and Receipt of Educational Services. Ronald H. Hinckley, Richard S. Beal, and Vincent J. Breglio -- Decima Research under contract with System Development Corporation, June, 1978.

Table 5.16 Mean Total Hours of Reading and Mathematics Offered by Racial/Ethnic Group and Grade: 1976-77 School Year

Racial/Ethnic Group	Grade 1	2	3	4	5	6
			Reading			
White	332	305	251	206	191	173
Black	301	318	245	239	241	202
Hispanic	269	249	260	232	237	251
ALL	323	303	250	213	201	181
			Math			
White	176	175	170	175	169	162
Black	184	195	189	190	208	182
Hispanic	161	165	183	180	197	189
ALL	176	177	174	178	176	166

Source: Hinckley, R.H., Beal, R.S., and Breglio, V.J. Students' Economic and Educational Status and Receipt of Educational Services. Study of the Sustaining Effects of Compensatory Education on Basic Skills, Technical Report No. 3, June 1978.

All racial/ethnic groups are offered less mathematics than reading instruction. For Whites, mathematics offerings drop slightly with grade level, from 176 to 162 hours per year. Black pupils begin school with 4 percent more offered mathematics instruction than White pupils, but this amount first rises slightly and then falls back to about the initial level by sixth grade, where Black offerings in mathematics exceed White offerings by 12 percent. Hispanic offerings start 8 percent lower than Whites', but rise steadily, exceeding those of Whites by 16 percent in the sixth grade.

As was pointed out earlier, the amount of exposure to instruction depends upon rate of attendance as well as hours offered. Therefore it is important to look at the hours of instruction attended. Table 5.17 displays the mean number of hours of reading and mathematics instruction attended by each of the three racial/ethnic groups at each grade level. It is clear that the amount of exposure to both mathematics and reading instruction is affected by racial/ethnic group and by grade level. Overall, there is greater exposure to reading than to mathematics. This difference is largest in the primary grades and decreases in the upper grades since the number of hours of reading attended decreases sharply, and the amount of mathematics increases. Comparison of Tables 5.16 and 5.17 reveals that although attendance rates for minority groups are lower than those for Whites, the differences are small enough that patterns of actual exposure to instruction are similar to offerings.

Total hours of instruction offered and attended in reading and mathematics are important indicators of the "extensity" of instructional services. Also of importance is the "intensity" of services provided to pupils in different racial/ethnic groups. One available index of the intensity of instructional services is class size. Where classes are smaller, pupil-teacher ratios are lower, and more teacher time can be devoted to small-group and tutorial instruction. The frequent use of compensatory education funds to provide additional teaching personnel or to reduce class size attests to the importance of this variable.

Table 5.17 Mean Total Hours of Reading and Mathematics Instruction Attended by Racial/Ethnic Group and Grade: 1976-77 School Year

Racial/Ethnic Group	Grade 1	2	3	4	5	6
			Reading			
White	314	291	238	197	182	168
Black	280	296	233	222	228	193
Hispanic	249	229	243	218	222	235
ALL	305	288	237	202	192	175
			Math			
White	166	167	163	167	160	156
Black	169	182	172	176	195	174
Hispanic	148	152	170	166	182	176
ALL	165	168	165	168	167	159

Source: Hinckley, R.H., Beal, R.S., and Breglio, V.J. Students' Economic and Educational Status and Receipt of Educational Services. Study of the Sustaining Effects of Compensatory Education on Basic Skills, Technical Report No. 3, June 1978.

Figures for 1965 (EEOS) and 1972 (Anchor) indicate that there have been changes in class size for minorities relative to Whites. In 1965, White students attended classes of 29 students, on the average; Blacks attended classes of 32, and Hispanics attended classes averaging 31-33 students. Minority students were

enrolled in classes 10 percent larger than those of Whites. By 1972, class size was 29.6 for both Blacks and Hispanics, only 3 percent larger than the 28.9 students in classes attended by Whites. This change reflects at least in part the impact of CE funding on elementary schools. The Sustaining Effects Study provided some more recent data (1976-77) on intensity of educational services, but these are not directly comparable to earlier available data. Figures from the Sustaining Effects Study focus on the class and group sizes pupils actually experience, reflecting pullout and special instruction, rather than on numbers of pupils enrolled in each self-contained classroom. The available evidence does point, however, to slightly smaller effective class sizes for minority pupils in the primary grades, and substantially smaller minority class sizes at the upper elementary level. Individualized (tutorial) instruction is more extensive for majority pupils in the first grade but this pattern is reversed by grade six. It is important to note, however, that this time pattern is almost precisely paralleled by that for unsupervised learning experiences (seatwork). This reflects the fact that teachers have only limited time, and when they devote more of it to tutoring some pupils, others must spend more time unsupervised.

The amount of instruction received from a teacher other than the classroom teacher (a non-regular teacher) varies with subject matter and racial/ethnic group. Overall, there is more instruction by specialist teachers in reading than in mathematics. In both reading and mathematics, and at all grade levels, Hispanic students spend the most time in instruction with a non-regular teacher; Whites spend the least. The reciprocal pattern obtains (in grades 1 - 4) for Hispanics but not for Whites. Hispanics spend the least time with the regular teacher, but Blacks -- not Whites -- spend the most. In grades 5 and 6 the amount of time with the regular teacher is more similar for all three groups.

5.6.2 Achievement in Elementary School

In this section, achievement test scores of White and minority pupils are compared. We wish to explore the nature of the achievement gaps between minority and White pupils, specifically answering the following questions:

-- How have elementary achievement test scores changed over the period between 1965 and 1972?

-- Are changes in minority White elementary achievement test score gaps attributable to causes other than changes in relative achievement?

-- Are there differences in patterns of achievement on different types of tests, such as vocabulary, reading, mathematics, and science?

The data presented below will show that while gaps have closed overall, differences are apparent among patterns of changes in different content areas. In addition, while Hispanic-White gap decreases were mostly prior to 1972, reduction of Black-White gaps has been more recent.

Three studies which employed nationally representative samples of pupils provided most of the data on which this discussion is based. These were the Equality of Educational Opportunity Survey (EEOS) which provided data from fall of 1965, the Anchor Test Study which provided data from spring of 1972, and the Sustaining Effects/Participation Study which provided data from fall of 1976. These three studies included approximately comparable measures of vocabulary, reading comprehension, and mathematics concept attainment, at different grade levels from one to six. In addition, data on science achievement in 1970 and 1973 for 9-year-olds and in 1969 and 1972 for 13-year-olds for different racial/ethnic groups were published by the National Assessment of Educational Progress (1976) and NAEP also provided information on reading achievement of 9- and 13-year-olds, by race, in 1971 and again in 1975 (Golladay and Noell, 1978).

The NAEP science and reading achievement data for each age level were collected using the same instrument at both time points. Thus, mean raw scores from 1969-70 and 1972-73 for science or from 1971 and 1975 for reading could be compared directly. For the EEOS, Anchor, and Sustaining Effects data collections, three different test batteries were used. As described in Appendix H, data on these different instruments were standardized to permit direct comparison of achievement gaps across studies. This standardization procedure uses only the proportions of pupils in different groups at or below each possible score, and is not concerned with the significance of each actual score itself. Thus, trends in minority - White achievement differences could be plotted in spite of differences in test length or

difficulty. While the standardization procedure permits comparison of gaps in different years, absolute levels of performance for individual groups cannot be compared across the different tests used. Thus, it cannot be determined whether a reduction in a minority-White gap is due to increasing minority achievement, decreasing White achievement, or different rates of progress for both groups. Unfortunately, no standarization or equating procedure can compensate for differences in the actual content of two tests, or correct for the bias introduced by different item formats or testing procedures. The different tests compared in this study have been carefully examined, and content and/or format discrepancies which may affect interpretation are noted in the discussion below. For the important comparisons of reading comprehension and vocabulary at the upper elementary level, available data across years are highly comparable, and show consistent patterns of results.

Test Batteries Used in Different Studies

As part of the EEO Survey, children were tested at grades 1, 3, and 6. Special test batteries were developed from the Educational Testing Service Sequential Tests of Educational Progress and the Inter - American Tests of General Ability. Batteries for each grade level included are described in section 9.9 of the EEOS report (Coleman, et al., 1966). Over 645,000 students at the elementary and secondary levels were involved in the EEO Survey.

The Anchor Test Study involved the administration of numerous tests of vocabulary and reading comprehension. Since more data were collected using the Metropolitan Achievement Test (MAT) than any of the other tests, MAT data were used from this study. Roughly 68,000 students in each of grades 4, 5, and 6 in over 900 schools provided these data. The 1976 Sustaining Effects study employed the Comprehensive Tests of Basic Skills (CTBS). Samples from this study of roughly 2,500 pupils at each of grades 1 - 6 were used in the comparisons described below.

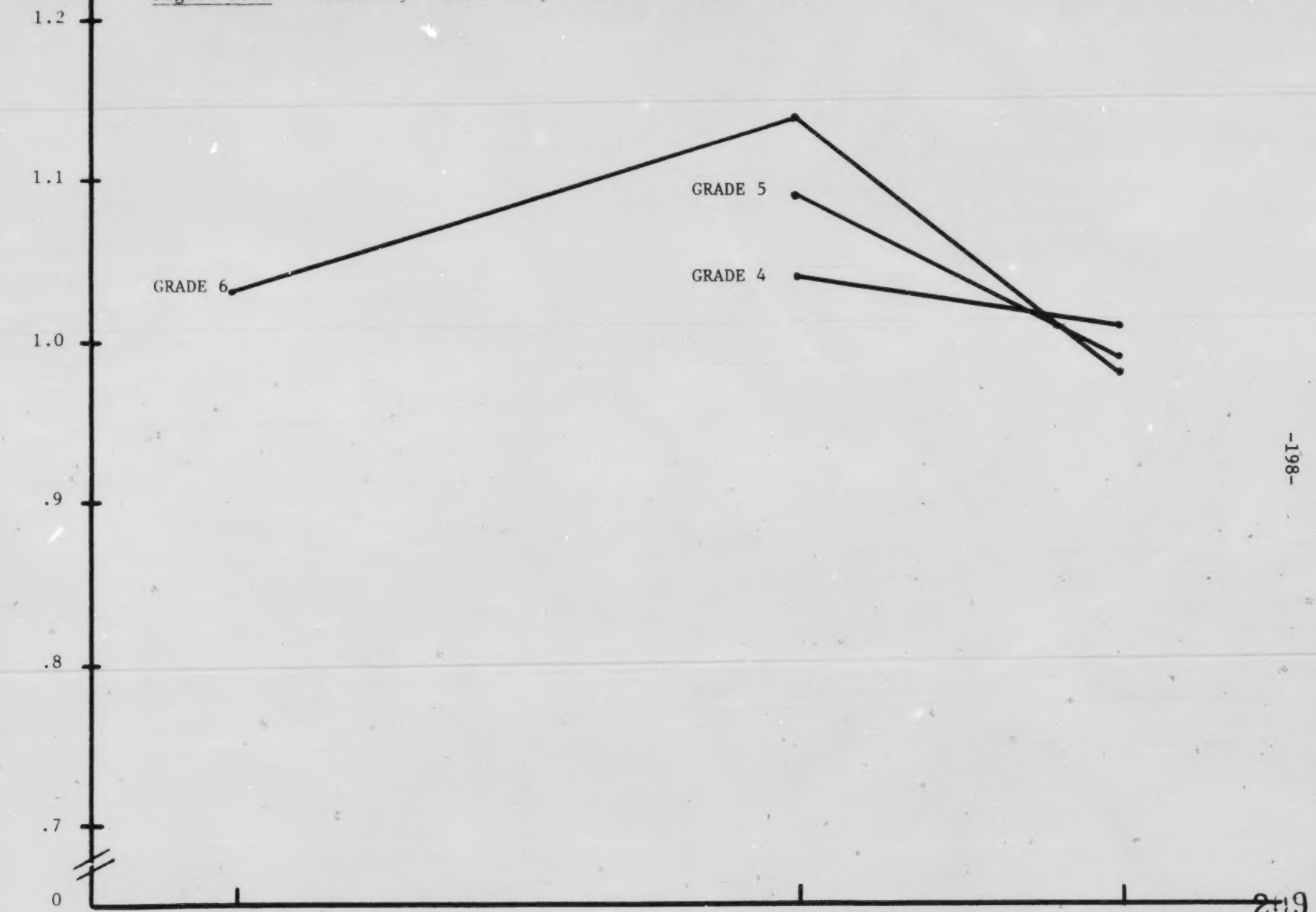
Trends in Vocabulary

At the first and third grade levels, no comparable vocabulary data were available. The EEO Survey batteries included picture vocabulary tests at these grade levels and the Sustaining Effects study used tests of letter sounds and reading vocabulary at grades 1 and 3. In grades 4, 5 and 6, comparable vocabulary tests from the MAT and CTBS were available for 1972 and 1976, and the 1965 EEO Survey for grade 6 included a test containing 25 similar items together with 25 sentence completion items, which appear to test a mixture of vocabulary, reading comprehension, and general information.

As shown in Figure 5.16,[1] the Black - White gap appears to have decreased between 1972 and 1976 at each of grades 4, 5 and 6, the average decrease being roughly 9 percent. The only data for grade 6 show a smaller gap in 1965 than in 1972, however. It is possible that the Black - White

[1]Data on which Figures 5.16 to 5.21 are based are presented in Appendix I.

Figure 5.16 Vocabulary: Elementary School White-Black Gaps



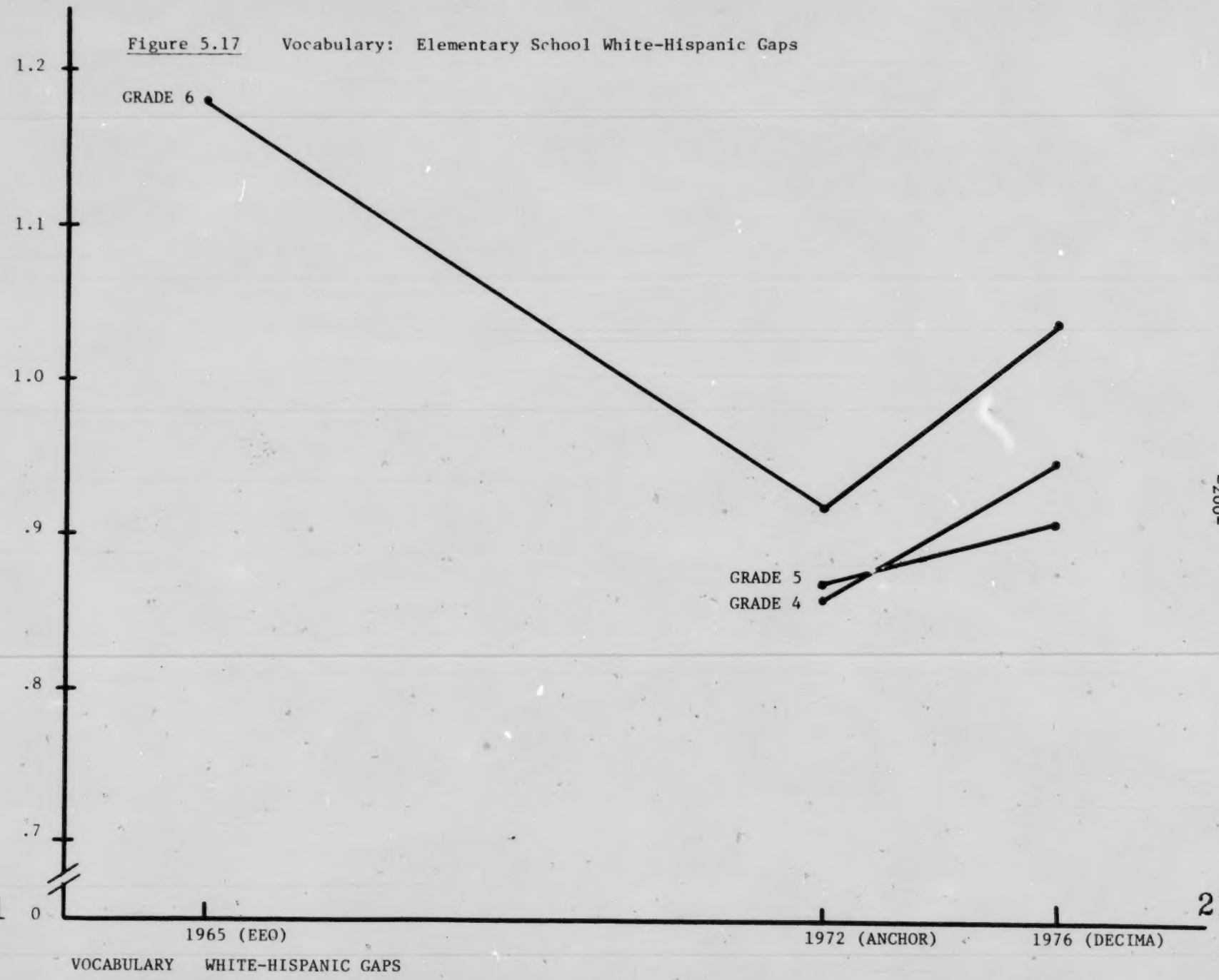
VOCABULARY WHITE-BLACK GAPS

achievement gap increased between 1965 and 1972 and then decreased again by 1976, but at least two alternative explanations for this finding must be considered. First, the content of the EEO Survey grade 6 vocabulary test was a mixture of both vocabulary and reading comprehension. Black - White gaps on reading comprehension tests are generally smaller than on vocabulary tests; hence, the gap on a test including both kinds of content would be expected to be smaller than on a test solely of vocabulary.

A second factor which may contribute to the smaller gap observed on the EEO Survey Test is a possible trend toward automatic grade promotion between 1965 and 1972. If fewer children received double promotions (skipped a grade) and fewer were held back (repeated a grade) the result would be greater homogeneity in the ages of children at any given grade level. In particular, the ages of Black and White sixth graders may have been more similar in 1972 than in 1965. If Black sixth graders in 1965 were typically older than their White classmates, the disparity in achievement between the two groups would have been less than the achievement gap between Black and White pupils more nearly the same age. Data in support of this hypothesis were presented in Section 5.5.

Figure 5.17 shows White - Hispanic vocabulary gaps from 1965 to 1976. Here increases in the gap are evident between 1972 and 1976 at each of grades 4, 5, and 6, averaging roughly 9 percent. The grade 6 EEOS data indicate that the White - Hispanic gap was between 10 and 30 percent larger in 1965 than

Figure 5.17 Vocabulary: Elementary School White-Hispanic Gaps

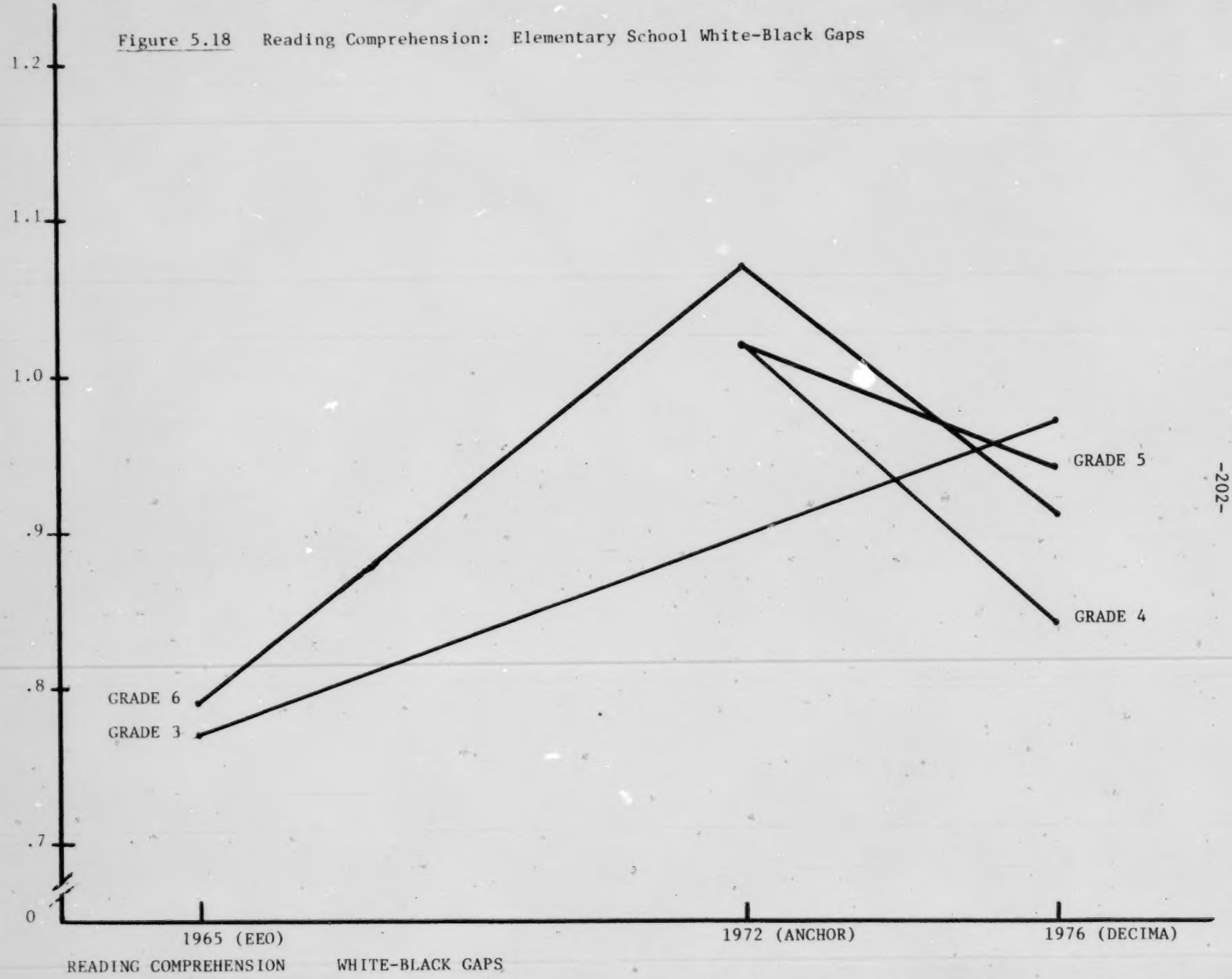


in either 1972 or 1976. The content difference between sixth grade vocabulary tests in the EEOS and the other instruments, and the probable trend toward greater age homogeneity would both tend to reduce the observed White - Hispanic achievement gap in 1965. Given that the observed gap is still larger in 1965 than in 1972 or 1976, it may be assumed that the actual improvement in Hispanic vocabulary test performance relative to Whites was substantial between 1965 and 1972.

Trends in Reading Comprehension

Comparable tests of reading comprehension were used at grades 3 (EEOS, Sustaining Effects), 4 and 5 (Anchor, Sustaining Effects) and 6 (all three studies). White - Black achievement gaps derived from these data are plotted in Figure 5.18. These data closely parallel results for vocabulary. Between 1972 and 1976, the White - Black difference diminished at each of grades 4, 5 and 6, the average decrease being roughly 13 percent. NAEP data on 9-year-old (typically grade 4) reading performance in 1971 and 1975 show a similar trend. Since the same exercises were used in both years, comparisons of 1971 and 1975 performance for each group can be made. Performance of both White and Black children improved over this period, but the improvement for Black children was larger. Among Whites the mean percent correct rose from 66.44 in 1971 to 67.67 in 1975, while the change for Blacks was from 49.70 to 54.51. Data for 13-year-olds showed no statistically significant change from 1971 to 1975 for the nation as a whole, or for either racial group.

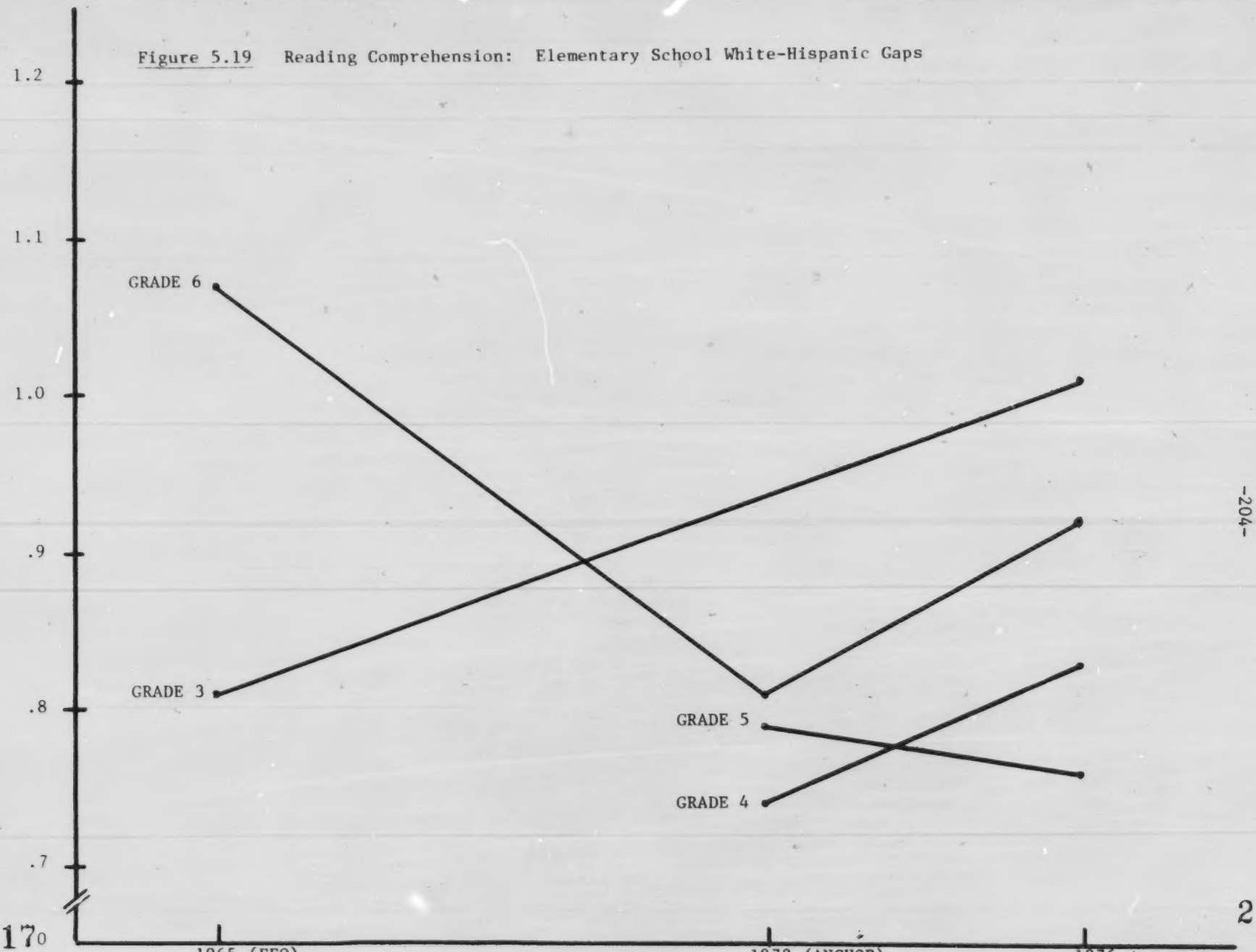
Figure 5.18 Reading Comprehension: Elementary School White-Black Gaps



As with vocabulary, a smaller White-Black gap was obtained from the EEOS data than from the more recent data at the sixth grade level. The third grade results for EEOS and the Sustaining Effects studies parallel those for grade 6. Once more, the EEOS gaps may have been influenced by differences in Black and White pupil age levels in 1965 which diminished by 1972, but this effect should have reduced the grade 3 gap less than the grade 6 gap.

Trends in White - Hispanic reading achievement gaps are displayed in Figure 5.19. As for vocabulary, there appears overall to have been an increase in the White - Hispanic reading comprehension gap between 1972 and 1976, but at grade 5 the observed gap diminished by roughly 4 percent. The average charge for grades 4, 5 and 6 was plus 7 percent, as compared to plus 9 percent for vocabulary. The White - Hispanic gap derived from the EEO Survey for grade 6 shows the same pattern for reading comprehension as was found for vocabulary. Data for grade 3, however, are inconsistent with this pattern. In grade 3, the observed gap in the 1965 data is 20 percent smaller than in the 1976 data, while at grade 6 it is 16 percent larger. The grade 3 reading comprehension White - Black and White - Hispanic gap are both smaller than expected. Given the overall consistency of other findings concerning vocabulary and reading comprehension achievement gaps, these anomolies may be attributable to some peculiarity of that particular test.

Figure 5.19 Reading Comprehension: Elementary School White-Hispanic Gaps

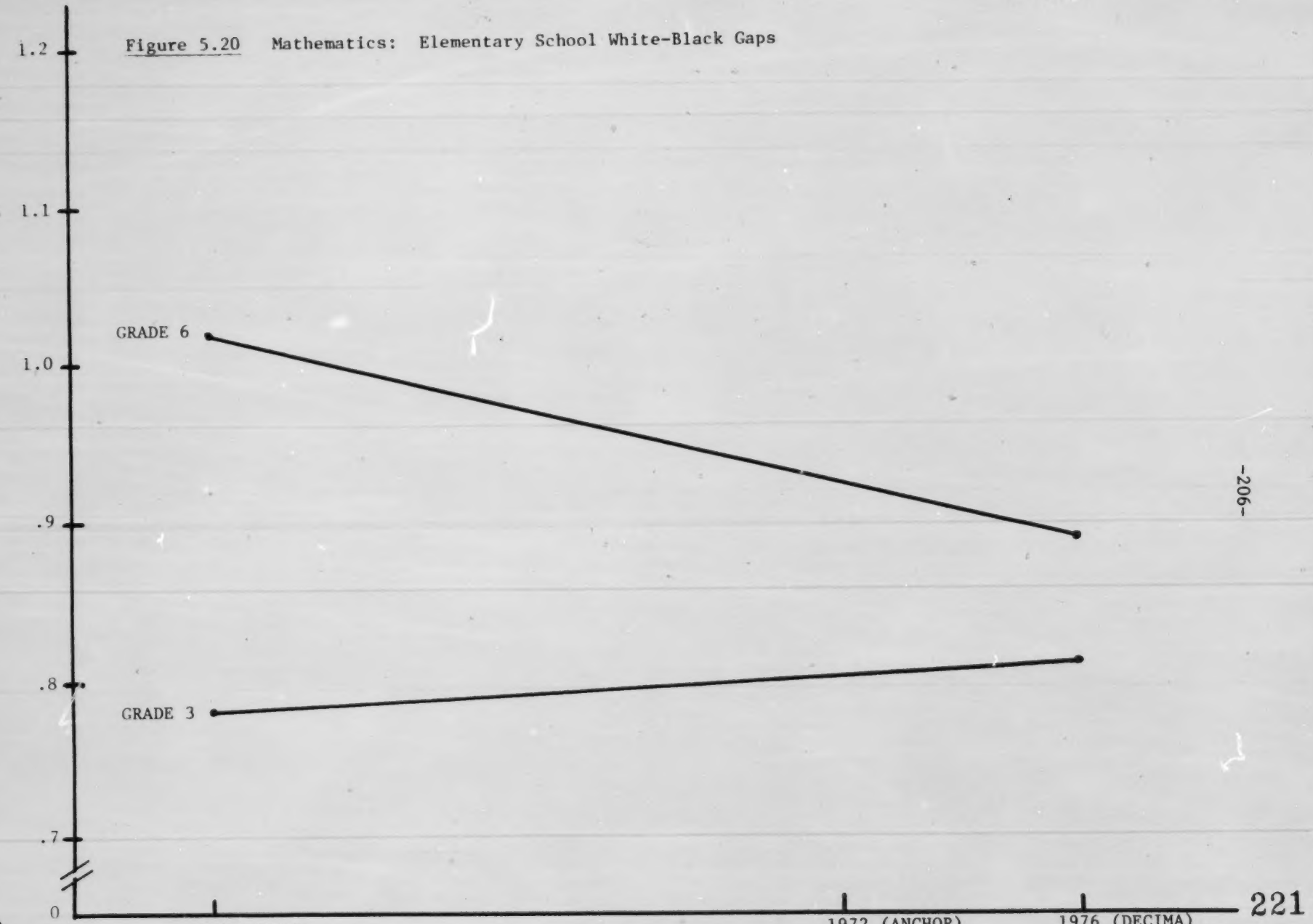


Trends in Mathematics

No mathematics tests were included in the Anchor Test Study. Thus, only data from 1965 and 1976 were available. The EEO Survey included tests of mathematics at the third and sixth grade levels, but the content of these tests differs somewhat from the CTBS mathematics concepts tests used in the Sustaining Effects Study. At both grade levels, the EEOS tests are more practical and less abstract, relying more upon general information and less upon academic instruction than the CTBS tests. At the sixth grade level, the CTBS mathematics concept instrument tests many specific vocabulary items (e.g., number sentence, closed figure, equilateral, parallelogram) and asks questions of different kinds (e.g., number series completion, describing rather than performing sequences of operations). The effect of these discrepancies is to reduce the confidence which can be placed in the observed trends across these two time points by introducing an unknown bias into the comparisons of gaps estimated from the two studies. The direction of this bias is probably toward smaller gaps at the more recent time point, since the 1976 tests at grades 3 and 6 appear to be more dependent on specific instruction, and less on general experience and familiarity with mathematics, than the 1965 tests.

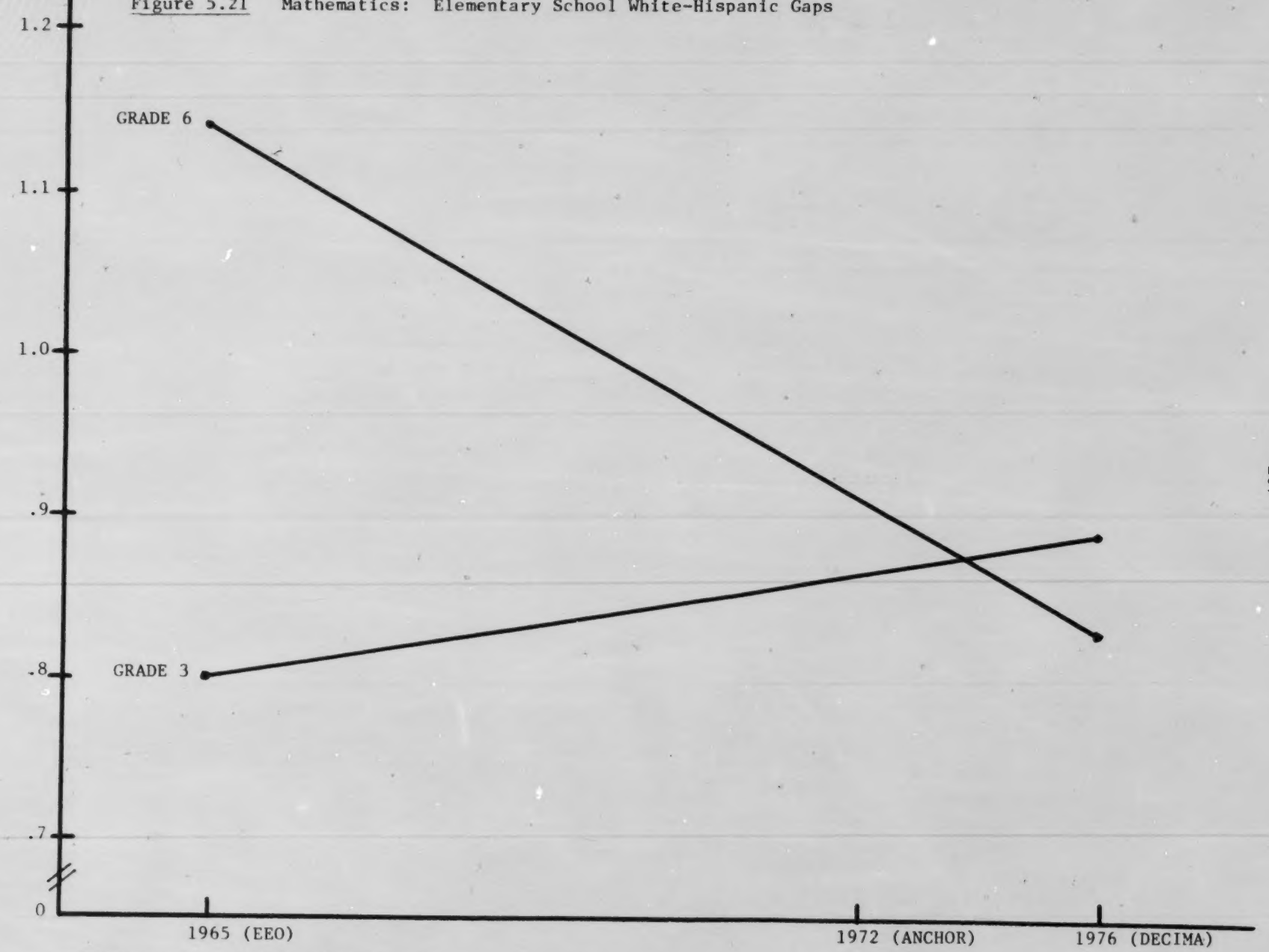
Figures 5.20 and 5.21 display White - Black and White - Hispanic gaps at grades 3 and 6. At the third grade level, slight increases in both gaps are shown between 1965 and 1976, while at the sixth grade level both appear to have decreased more substantially. The observed White - Black gap fell

Figure 5.20 Mathematics: Elementary School White-Black Gaps



MATHEMATICS WHITE-BLACK GAPS

Figure 5.21 Mathematics: Elementary School White-Hispanic Gaps



MATHEMATICS WHITE-HISPANIC GAPS

13 percent at the sixth grade level between 1965 and 1976. The test - content bias described above would tend to inflate this observed gap, while the automatic promotion trend posited above would tend to reduce it. The same would be true of the observed White - Hispanic gap, which fell 27 percent between the two time points. If it is assumed that the biases discussed were small and tended to cancel, averages of the percent change in observed gaps at the third and sixth grade levels show a decrease in the White - Black gap of 4 percent and a decrease in the White - Hispanic gap of 8 percent between 1965 and 1976.

Trends in Science Achievement

While only limited data are available concerning science achievement, they have the advantage that the same assessment exercises were used in 1970 and 1973. Thus, it is possible to compare performances of each group (Whites and Blacks) across years using these data. The available data from NAEP showed a small decrease in science achievement among both 9- and 13-year-olds for the nation, between 1970 and 1973.

Achievement fell for both Blacks and Whites over this time period, at both age levels, but the data were not sufficiently precise to determine whether the Black-White gap had increased or decreased.

Summary

Between 1972 and 1976, the Black - White achievement gaps in vocabulary and reading comprehension at the upper elementary level decreased by 9 to 13 percent. Between 1965 and 1972 Black - White gaps in these areas may have increased, but alternative explanations of observed increases are possible. The Hispanic - White achievement gaps in these areas have shown a different pattern. Between 1965 and 1972, Hispanic - White gaps fell roughly 23 percent in sixth grade vocabulary and reading comprehension, but these gaps increased again by roughly 8 percent between 1972 and 1976. In mathematics achievement, limited data suggest that the Black - White achievement gap fell roughly 4 percent and the Hispanic - White fell roughly 8 percent between 1965 and 1976. The direction of any trend in science achievement could not be established.

5.7 Secondary Education

Organization of the Secondary School

At the elementary school level, the fundamental organizational unit is the self-contained classroom. In secondary schools, a departmentalized organization is used almost universally. Under this organization, the school day is divided into from five to nine periods, and each student pursues different activities during each period, according to a weekly schedule. These activities include primarily class meetings in academic and practical subject areas, classes in physical education, music, art and other special subjects, and study halls. In addition, selected students may participate in work-study programs of various sorts, attending school part of the day and earning credit during the remainder of the day by participating in some out-of-school vocational setting.

Within this general framework there is much diversity. Secondary schools may enroll as few as 25 pupils or as many as 6,000; they may offer programs ranging from a comprehensive selection of basic and advanced academic, pre-vocational and vocational courses to a narrow selection of specialized courses. Typically, secondary schools are larger than elementary schools, serving the combined attendance areas of several such schools. They usually encompass grades 9-12 or 10-12, and offer at least a core of basic academic courses, including English, mathematics, science (typically biology, chemistry and physics), history or social studies, and at least first-year

courses in one or more foreign languages. In addition, some practical courses in industrial arts, home economics, and business are generally available.

On the basis of their achievement, measured aptitude, interests and aspirations, programs of study are developed for each high school student. Typically, a program is outlined for the student's entire high school career and reviewed periodically. These programs fall into three basic types, which form the basis for some of the racial/ethnic comparisons reported below: General, Academic, and Vocational or Technical programs.

-- The academic program is designed to prepare the student for post-secondary education; few vocational or practical courses are included.

-- Vocational or technical programs emphasize trade or industrial courses, or training in clerical skills. While students in such programs may be equipped to continue their education in trade schools, technical colleges, etc., many would be expected to enter the labor force immediately following high school graduation.

-- General secondary school programs are less well specified. They may represent a more even balance of academic and practical studies, and may be chosen by students who desire neither a specifically college preparatory program nor extensive vocational training. Smaller high schools, especially in rural areas, may offer only general high school programs due to their limited size and resources.

Enrollments in Public Versus Private Secondary Schools

Since 1970, White students have been roughly three to four times as likely as Blacks to be enrolled in private as opposed to public secondary schools. Given the consistently higher achievement of private school enrollees, this gap in private school enrollment must be taken as a gap in quality of education offered to White and Black students. Surely, this discrepancy is due in part to the different economic conditions prevailing among Whites and Blacks, but it is not eliminated when income is controlled. Among Whites in 1975, when the four family income categories "Under $5,000," "$5,000 to $9,999," "$10,000 to $14,999," and "$15,000 and over" are examined separately, the proportions of high school students in private schools are 3.2 percent, 5.5 percent, 6.8 percent, and 11.7 percent respectively. In contrast to this rather smooth increase, the corresponding proportions for Blacks are 1.7 percent, 1.5 percent, 2.3 percent and 9.4 percent.[1] Thus, within income categories below $15,000, White high school students are roughly 2 to 3.5 times as likely as Black high school students to be enrolled in private schools.

As shown in Table 5.18, there are dramatic regional variations in this ratio. In the southeast, the median ratio of percent private enrollments for Whites to percent private enrollments for Blacks for the years 1970-74 was 8.1. Corresponding median ratios for the northeast, central and western regions

[1]Figures recomputed from Golladay, 1977 Table 4.08.

Table 5.18 Enrollment of Persons 14 to 24 Years Old in Private Secondary Schools, by Region and Race: 1970 to 1975

Region and race	Year					
	1970	1971	1972	1973	1974	1975
	(Numbers in thousands)					
Northeast						
White						
Private enrollment	424	386	368	408	387	374
Percent of total enrollment	13.7	12.3	11.4	12.8	11.9	11.5
Black						
Private enrollment	9	23	26	18	16	24
Percent of total enrollment	2.2	5.1	4.8	3.8	3.2	4.6
Southeast						
White						
Private enrollment	128	178	167	172	185	200
Percent of total enrollment	5.6	7.6	7.3	7.6	8.0	8.4
Black						
Private enrollment	6	5	7	2	10	1/
Percent of total enrollment	0.8	0.7	0.9	0.2	1.2	
Central						
White						
Private enrollment	357	317	378	350	312	346
Percent of total enrollment	9.4	8.2	9.7	8.9	8.2	8.8
Black						
Private enrollment	14	16	14	18	14	19
Percent of total enrollment	3.7	3.6	3.6	4.6	3.4	4.3
West						
White						
Private enrollment	145	134	123	139	160	146
Percent of total enrollment	4.8	4.4	4.0	4.3	5.0	4.6
Black						
Private enrollment	6	2	4	12	13	8
Percent of total enrollment	2.5	0.8	1.7	4.4	4.6	2.6
Nation						
White						
Private enrollment	1054	1015	1036	1069	1044	1066
Percent of total enrollment	8.3	8.2	8.2	8.4	8.2	8.3
Black						
Private enrollment	35	46	51	50	53	
Percent of total enrollment	2.0	2.5	2.6	2.3	2.6	

1/ Less than 500,000 persons [sic].

Source: Golladay, 1977, p. 195.

were 3.4, 2.4 and 1.9, respectively. There are also dramatic differences in the overall percent enrolled in private secondary schools from one region to another. For Whites and Blacks combined, median percent of high school students in private schools for the years 1970-74 was 7.5. Broken down by region, the percentage was 11.4 for the northeast, and percentages for the southeast, central and western regions were 5.7, 8.5, and 4.3, respectively. These discrepancies reflect the distinct kinds of private secondary schools found in different regions, and the distinct purposes they serve. In the southeast, especially in urban areas, numerous private academies have been established as alternatives for White students to the desegregated public schools. The high ratio of White to Black private school enrollments in the southeast reflects the presence of these all-White academies, as well as the relatively greater economic gap between Blacks and Whites in that region. In large urban centers, both Black and White parents are turning to private schools, especially parochial schools, out of concern for the quality of education in public school systems. The high overall rate of private secondary school enrollment in the northeast reflects the concentration of urban centers in that region.

5.7.1 Educational Process at the Secondary School Level

Educational process refers to the quantity, quality, and nature of schooling pupils are exposed to. Data discussed in Part I pointed to great disparities

in the educative qualities of home environments for Whites and different minorities; this section is concerned only with educational process arising from the formal school setting, and only with the years of high school.

The National Longitudinal Study of the High School Class of 1972 (NLS) provided useful data on enrollments in different kinds of high school programs, course taking, homework, and other variables, on which much of this discussion is based. Earlier data from the EEO Survey (1965) and Project TALENT (1960) have also been incorporated, and indications of trends are reported.

Data from these different sources were typically not directly comparable, and the indices calculated to facilitate comparisons could not fully compensate for differences in the wording of questions, the definitions of courses, the span of time summarized (grades 9-12 versus 10-12) and so forth. Nonetheless, under reasonable assumptions different indicators led to similar inferences, increasing our confidence in the conclusions presented.

In the first part of this section, available information on schooling for typical Black and White students is briefly sketched. These sketches are then contrasted, and where available, comparable data for Hispanic students are also presented. The effect of controlling socioeconomic status is described for several racial/ethnic comparisons. Finally, indications of trends in minority - White gaps since 1960 are discussed.

Status of Secondary School Process for White and Minority Students

According to NLS data, White students in the class of 1972 took an average of 6.1 semesters of English, 7.5 semesters of mathematics and science, and 2.2 semesters of a foreign language during the last three years of high school (see Table 5.19). Among White students, 45 percent reported being in academic programs, 32 percent in general programs and only 23 percent in vocational or technical programs (see Table 5.20). Only 4 percent of these students reported that homework was not assigned, but 7 percent indicated that homework was assigned but they did not do it; 35 percent reported doing 5 hours of homework or more per week (see Table 5.21).

As shown in Tables 5.19, 5.20, and 5.21, results from the NLS of the High School Class of 1972 indicate that Hispanic students received the most total instruction (2579 hours), followed by Whites (2471) and Blacks (2464). Black students showed averages of 6.0 semesters of English, 7.3 semesters of mathematics and science, and 1.5 semesters of foreign language during the last three years of high schools. Black students were almost evenly split among academic, general, and vocational/technical programs, the respective proportions being 33, 33 and 34 percent. Four percent of Black students stated that no homework was ever assigned, and another 4 percent reported that they had homework but did not do it; 40 percent reported spending 5 hours per week or more on homework.

Table 5.19 Average Semesters Taken in Selected Subjects and Total Hours of Instruction During the Last Three Years of High School, by Racial/Ethnic Group and Socioeconomic Status (SES)

SES	Racial/Ethnic Group	Subject Area Semesters					Total Hours Of Instruction
		English	Mathematics	Science	Foreign Language	Social Studies	
Low	White	6.0	3.1	3.2	1.2	5.3	2526
	Black	6.0	3.6	3.4	1.1	5.3	2483
	Hispanic	5.9	3.5	3.2	2.2	5.2	2617
Middle	White	6.1	3.8	3.6	2.1	5.3	2477
	Black	6.0	3.9	3.7	2.0	5.4	2408
	Hispanic	5.8	3.3	3.3	2.5	5.2	2525
High	White	6.2	4.5	4.2	3.2	5.3	2413
	Black	6.2	4.7	4.1	3.1	5.2	2537
	Hispanic	5.8	3.9	3.8	3.2	5.0	2446
Combined	White	6.1	3.8	3.7	2.2	5.3	2471
	Black	6.0	3.8	3.5	1.5	5.3	2464
	Hispanic	5.9	3.5	3.2	2.4	5.2	2579

Source: National Longitudinal Study, 1972. Special Tabulations prepared by William H. Schmidt, Michigan State University.

Table 5.20 Type of High School Program Reported by Students in Different Racial/Ethnic Groups, 1960 and 1972

Year	Racial/ Ethnic Group	Percent of Students Reporting Each Type of Program		
		General	Academic	Vocational/ Technical
1960	White	24.3	43.6	32.1
	Black	25.0	27.3	47.8
	Hispanic	*	*	*
1972	White	32.1	45.4	22.5
	Black	32.6	32.9	34.3
	Hispanic	40.6	29.3	30.1
Percent change 1960-72	White	+32%	+ 4%	-30%
	Black	+30%	+21%	-28%

*Sample size too small for stable estimates.

Source: Data for 1960 are from Project Talent and data for 1972 are from the National Longitudinal Study. See Appendix G for details.

Table 5.21 Reported Time Spent on Homework by Twelfth Grade Students, by Racial/Ethnic Group: Spring, 1972

Response	Percent of Students by Racial/Ethnic Group		
	White	Black	Hispanic
No homework is ever assigned	4.4	3.8	5.1
I have homework but don't do it	6.6	3.9	6.8
Less than 5 hours a week	54.5	52.3	55.6
Between 5 and 10 hours a week	29.2	34.7	27.2
More than 10 hours a week	5.3	5.2	5.4

Source: National Longitudinal Study, 1972. Student Questionaire and Test Results by Sex, High School Program, Ethnic Category, and Father's Education, by William B. Fetters, National Center for Education Statistics. Washington, D.C.: U.S. Government Printing Office, 1975.

These various indicators give a mixed picture of racial differences in high school education. A Black student was only 72 percent as likely as a White student to report being enrolled in an academic program and 52 percent more likely to report being enrolled in a vocational or technical program. On the other hand, differences in average semesters taken in the important areas of English, mathematics and science for Blacks and Whites were less than 3 percent, although average semesters of foreign language for Blacks was only 68 percent as high as for Whites. When socioeconomic status (SES) is controlled, it appears that Blacks take even more science and mathematics than do Whites of comparable SES. Controlling for SES, as defined by a composite of mother's education, father's education, income, occupation, and household items, Blacks took 4 percent more semesters of science, 8 percent more semesters of mathematics, only 1 percent less English, and only 5 percent less foreign language than did White students. In addition, Blacks spend substantially more time on homework.

Hispanic students' course-taking in science and mathematics lagged behind that of Whites and Blacks (11 percent less than Whites, 8 percent less than Blacks), although on the average they took a comparable number of semesters of English, and more foreign language than did the other two groups (10 percent more than Whites, 60 percent more than Blacks). When SES is controlled, these differences are attenuated, but Hispanics appear to take less science and mathematics and more foreign language than do either Whites or Blacks of comparable SES. Fewer Hispanics than Blacks were enrolled in either academic or vocational/technical programs; 41 percent were in general programs, 29 percent in college preparatory and 30 percent in vocational or technical. The proportions of Hispanic students reporting

spending various amounts of time on homework were very close to the proportions for Whites. It is possible that Hispanics do slightly less homework than Whites, but in no categories were the differences in proportions for the two groups statistically significant.

In summary, these sketches show that more Whites than minority students in 1972 reported being in college preparatory tracks in high school, although tabulations of semesters taken in the gross categories of English, mathematics and science showed only small discrepancies between Blacks and Whites. More minority students than Whites were enrolled in vocational or technical programs, but this disparity was apparently due to differences in socioeconomic status among different racial/ethnic populations. The larger amount of time devoted to homework by Blacks suggests a significant commitment to formal educational activities among these students, although it also may reflect differences in the policies of schools serving different populations.

Given the similarity in course-taking and the larger out-of-school time commitment of Blacks to educational activities, why should 28 percent fewer Blacks report being enrolled in academic or college preparatory programs? This discrepancy could reflect differences in self-concept, career expectations and college plans, or labels applied by teachers, counselors, etc., rather than clearly defined differences between "general" and "academic or college preparatory" high school programs. Tables 5.22 and 5.23 indicate that the classification of high school programs as general, academic

or vocational/technical is indeed imprecise. Among Whites, 28 percent of students disagreed with survey administrator's classifications, and 39 percent of the Black students classified their programs differently then did survey administrators. These tables do not, however, show that Blacks were more likely than Whites to call programs general which survey administrators labeled academic. Where White students designated their programs as academic, 84 percent of survey administrators concurred; where Black students considered themselves to be in academic or college preparatory programs, only 62 percent of survey administrators concurred. Overall, more Blacks and fewer Whites considered themselves to be in academic programs than were so designated by survey administrators. These data suggest either unrealistically high academic expectations among Blacks in high school, or differential expectations of school staff for Black and White students. Failure of Blacks to recognize that their coursework is adequate to satisfy college admissions requirements does not appear to be the problem.

While the course-taking and homework data presented above indicate that the White - Black gap in secondary school process is small, the data do suggest that Hispanics lag behind other groups in academic quality of education received. These students were 25 percent more likely than either Whites or Blacks to describe their high school programs as "general," and took substantially fewer courses in the important areas of science and mathematics than did White or Black students.

Table 5.22 High School Students' Designations of Their High School Programs, by School Survey Administrator Program Designation, and Race

Survey Administrator's Program Designation	Race	Weight*	Students' Program Designation (Percents)		
			General	Academic	Vocational/ Technical
General	White	614,255	62.7	19.8	17.5
	Black	106,597	50.0	20.6	29.4
Academic	White	1,035,801	17.0	79.2	3.8
	Black	68,293	18.1	73.4	8.5
Vocational/ Technical	White	503,026	25.7	7.2	67.1
	Black	70,180	20.7	12.1	67.2
Overall	White	2,153,082	32.1	45.4	22.5
	Black	245,070	32.7	32.9	34.4

*Estimated numbers of twelfth graders in the class of 1972.

Source: Thompson, B.W. National Longitudinal Study of the High School Class of 1972, Tabular Summary of Student Questionaire Data, Volume I. Washington, D.C.: U.S. Government Printing Office, 1974.

Table 5.23 School Survey Administrator's Designations of High School Student's Programs by Student Program Designation, and Race

Students' Program Designation	Race	Weight*	Survey Administrator's Program Designation (Percents)		
			General	Academic	Vocational/ Technical
General	White	690,460	55.8	25.5	18.7
	Black	80,222	66.5	15.4	18.1
Academic	White	977,988	12.4	83.9	3.7
	Black	80,591	27.3	62.2	10.5
Vocational/ Technical	White	484,573	22.2	8.1	69.7
	Black	84,257	37.2	6.9	55.9
Overall	White	2,153,021	28.5	48.1	23.4
	Black	245,070	43.5	27.9	28.6

*Estimated numbers of twelfth graders in the class of 1972.

Source: Thompson, B.W. National Longitudinal Study of the High School Class of 1972, Tabular Summary of Student Questionaire Data, Volume I. Washington, D.C.: U.S. Government Printing Office, 1974.

Trends in Secondary School Process for White and Minority Students

In the thirteen years spanned by 1960 and 1972, the gap in quality of schooling for White versus minority students closed dramatically. In this section, data in support of this statement, relating to five different variables, are discussed. These variables are (1) total hours of public high school instruction offered, (2) reported time spent on homework, (3) class size, (4) proportion enrolled in each of general, academic and vocational/technical programs, and (5) enrollments in specific types of courses. For all five, data for the year 1960 are available from Project TALENT. For each variable, data are also available from either the EEO Survey for 1965 or the NLS for 1972, or both. Available data suggest that White - minority gaps closed more between 1960 and 1965 than between 1965 and 1972, but data at all three time points were available only for time spent on homework and for enrollments in specific types of courses.

Hours of instruction offered and attended. Differences in amount of instruction offered and attended are not substantially different for Whites and minority pupils. Data on hours of instruction offered in 1960 and 1965, and on hours exposed in 1972 were available, but these data were not directly comparable since the 1965 data gave total minutes school was in session, the 1960 data yielded the product of number of class periods and average length of class period, which excluded class transition times, lunch, etc., and the

1972 data were based on course taking figures. Accordingly, only minority - White ratios are presented in Table 5.24. In 1960, Blacks were offered roughly 3 percent less schooling than Whites, while in 1965 they were offered roughly 2 percent more and 1972 the amounts were substantially equal. These differences are small relative to the effects of differential attendance rates and differential enrollment rates. While published tables from the EEO Survey and the NLS did not provide data which could be used to determine trends, data from Project Talent show that in 1960 White twelfth graders in public schools were absent an average of 4.85 days during the preceding year, Black twelfth graders an average of 6.38 days, and Hispanics an average of 7.62 days. Thus, while Blacks were offered 97 percent as much schooling as Whites in 1960 and Hispanics were offered 101 percent as much, they attended only 96 percent and 99 percent as much, respectively. Differential dropout rates and the recent decrease in dropout rate for Blacks were discussed earlier in this chapter.

Table 5.24 Relative Amounts of Time Provided for Schooling to Public High School Students in Selected Racial/Ethnic Groups

Year	Ratio of Ethnic Group Mean to White Group Mean	
	Black	Hispanic
1960	.97	1.01
1965	1.02	1.02*
1972	1.00	1.04

*Unweighted average of ratios for Mexican Americans (1.01) and Puerto Ricans (1.02).

Sources for these data are Project Talent (1960) and EEO Survey (1965), and NLS (1972). Computations to produce this table are described in Appendix G.

Table 5.25 Relative Amounts of Time Spent on Homework by High School Students in Selected Racial/Ethnic Groups

Year	Ratio of Ethnic Group Median to White Median	
	Black	Hispanic
1960	.86	.39
1965	1.19	.91*
1972	1.13	.96

*Unweighted average of ratios for Mexican - Americans (.93) and Puerto Ricans (.88).

Sources for these data are Project TALENT (1960), the EEO Survey (1965) and the National Longitudinal Study (1972). Computations to produce this table are described in Appendix G.

Time Spent on Homework. Minority students, especially Blacks, spend more time on homework than do White students. Table 5.25 shows ratios of hours of homework for minority groups to hours of homework for Whites. The data show that since 1965 Blacks in high school have spent from 10 to 20 percent more time on homework than Whites, while Hispanics have spent 5 to 10 percent less time on homework than Whites. Five years prior to 1965, minorities spent substantially less time than Whites on homework. While data on homework at these three time points were not directly comparable, indications are that the total time spent doing homework fell considerably for all three racial/ethnic groups between 1960 and 1972. The relatively greater decrease for Whites accounts for the closing of the gap in time spent on homework.

Table 5.26 Secondary School Class Size, by Ethnic Group

Year	Average Class Size		
	White	Black	Hispanic
1960	27.8	30.5	28.5
1965	31.0	34.0	32.5*

Year	Ratio of Ethnic Group Mean to White Mean		
	White	Black	Hispanic
1960	1.00	1.10	1.03
1965	1.00	1.10	1.05

*Unweighted mean of class sizes for Mexican Americans (32.0) and Puerto Ricans (33.0).

Sources for these data are Project TALENT (1960) and the EEO Survey (1965). Computations to produce this table are described in Appendix G.

Class Size. Data on class size were available for 1960 and 1965. As shown in Table 5.26, minority students at the secondary school level typically had larger classes than White students at both of these time points. Between 1960 and 1965 average class sizes increased for all groups, but the ratios of minority class size to White class size remained relatively constant.

Proportion Enrolled in Different Kinds of Programs. Enrollments in different kinds of secondary school programs for different racial/ethnic groups in 1972 were discussed earlier. As described above, these discrepancies are important indicators of differences in the kinds of courses taken by minority and White students. It was found that Blacks were 28 percent less likely to be enrolled in academic or college preparatory programs than White students, and Hispanics were 35 percent less likely. Comparable Project Talent data for White and Black twelfth graders in 1960 were also included in Table 5.20. These data show that in 1960, Blacks were 37 percent less likely to be enrolled in academic programs than Whites. The difference in percent vocational/technical enrollments for Blacks and Whites also decreased from 1960 to 1972. Thus, while sizable gaps in percent enrolled in different kinds of programs remained in 1972, they were substantially smaller than the gaps in 1960.

Coursetaking in Selected Subjects. Gaps in coursetaking in English, science, and foreign language have largely been eliminated. Data on coursetaking were available at all three time points, but in different forms. Thus, in Table 5.27 comparisons of 1965 to 1960 and of 1972 to 1960 are presented separately. The data show that between 1960 and 1965 coursetaking in English, science and foreign language increased dramatically, especially for minorities. Black - White gaps in all three areas diminished, and Hispanic - White gaps fell in the areas of English and science.

Table 5.27 Coursetaking in English, Science and Foreign Language by Selected Racial/Ethnic Groups in 1960, 1965 and 1972

Variable	Year	Racial/Ethnic Group			Ratio to Value for Whites	
		White	Black	Hispanic	Black	Hispanic
Percent taking no more than two years of high school English	1960	23.1	44.4	55.6	1.92	2.41
	1965	4	12	8.5*	3.00	2.13
Percent taking no more than one year of high school science	1960	39.2	55.6	55.6	1.42	1.42
	1965	21	26	25.5*	1.24	1.21
Percent taking no foreign language courses in high school	1960	49.6	60.9	44.4	1.23	.90
	1965	42	40	40.5*	.95	.96
Mean number of semesters of English**	1960	6.51	5.06	5.14	.78	.79
	1972	6.07	6.00	5.86	.99	.97
Mean number of semesters of science**	1960	3.79	3.32	2.89	.88	.76
	1972	3.66	3.54	3.24	.96	.88
Mean number of semesters of foreign language**	1960	2.12	1.12	1.19	.53	.56
	1972	2.17	1.46	2.36	.68	1.09

*Unweighted average of percents for Mexican Americans and Puerto Ricans.
**Based on four years of high school for Project Talent (1960) and three years for NLS (1972).

Derivation of this table is discussed in Appendix G. Two sets of results are presented due to constraints imposed by the forms in which data were available.

Comparisons of 1960 data to figures for 1972 must be made cautiously, since 1972 data refer to grades 10-12 while 1960 data refer to grades 9-12. It is more meaningful to compare ratios than absolute numbers, given this discrepancy. The ratios presented in Table 5.27 show that, except in the area of foreign language for Blacks and the area of science for Hispanics, differences in coursetaking were largely eliminated by 1972. In all three areas for both minority groups improvement is shown between 1960 and 1972. While direct comparison of 1965 and 1972 is not possible, the data for 1965 suggest that gaps were already quite small by then, and little further improvement could have occurred between 1965 and 1972.

Summary

To assess Black - White differences in secondary school process we examined the nature of coursetaking, the subject areas of enrollment, the type of track, the degree of homework required and completed, the class sizes, and the hours of instruction offered. In 1960, sizeable differentials in these measures were observed. Between 1960 and 1965 it appears that the most closure took place, and by 1972, gaps in hours of instruction offered (though not attended), as well as time spent on homework and types of courses taken all achieved parity or favored Blacks, whereas previously Whites had been receiving preferential treatment. However, class sizes for Blacks never

reached parity with Whites, and Whites are still more likely than Blacks to be in college preparatory tracks. Blacks predominiate in vocational/technical tracks. Gaps in program enrollment did diminish, but parity was not achieved. To the extent that parity in hours of instruction offered, time spent on homework, and types of courses taken are equivalent to quality of educational process, we can conclude that the racial gaps in quality of secondary education have narrowed. Disturbing to any educator concerned with quality is the failure to attain parity in curricular tracking, in spite of some progress, and increases in class size for all racial/ethnic groups.

5.7.2 Outcomes of Schooling: Secondary

In this section, test scores of White and minority pupils in the ninth and twelfth grades are compared, and trends in minority - White achievement gaps are traced. The data on which these comparisons are based come primarily from three major studies which provided nationally representative estimates of test performance for White, Black and Hispanic students. These were Project TALENT, which provided data as of spring, 1960; the Equality of Educational Opportunity Survey (EEOS), providing data as of fall, 1965; and the National Longitudinal Study of the High School Class of 1972 (NLS), which provided data as of spring, 1972.

In all three studies, tests of vocabulary, reading comprehension and mathematical reasoning were included. In addition, TALENT and EEOS included "non-verbal" or "abstract reasoning" tests. Tests in these four content areas are referred to below as achievement tests. The EEO Survey also

included five tests of general information. These were assembled from test items in the files of the Educational Testing Service, and were described as sampling areas students were likely to have learned about outside of school, rather than in the classroom. From the extensive set of information test subscales available for Project TALENT, composite scales were selected or constructed which closely approximated the content of each of the EEOS information tests. No comparable data were available from NLS. The five information tests are Practical Arts - Males (tools, automobiles, building, etc.); Practical Arts - Females (food, sewing, decorating, etc.); Natural Science (aeronautics and space, chemistry, health, etc.); Social Science (history, government, public affairs, etc.); and Humanities and Arts (literature, music, art, etc.). In the TALENT and EEOS data sets, the same tests were available for grades 9 and 12. NLS data were available for grade 12 only.

In addition to data from these three studies, the National Assessment of Educational Progress (NAEP)[1] provided some longitudinal information on reading achievement and science achievement for 17-year-olds (approximately the twelfth grade level). Reading achievement data are reported for 1971 and 1975 (Golladay and Noell, 1978), and science data are reported for 1969 and 1973 (NAEP, 1976).

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[1]Date taken from the National Assessment of Educational Progress were published in Conditions of Education various years and Social Indicators, (OMB, 1973 and U.S. Bureau of the Census, 1977).

The NAEP data were collected using the same instrument at both time points. Thus, mean raw scores for Blacks and Whites could be compared directly to determine whether each group had changed, and also whether the achievement gap had increased or decreased significantly. Data collections for TALENT, EEOS and NLS, however, employed different test batteries, hence direct comparisons of raw scores for these three studies were not meaningful. As described in Appendix H, data from these different studies were standardized in order to derive directly comparable measures of racial/ethnic achievement gaps across the three studies. This procedure uses only the proportions of pupils in different groups at or below each score, and is independent of the absolute level of performance represented by the score itself. Thus, trends in minority - White achievement differences could be plotted using data from different studies, in spite of differences in test length or difficulty. Variations in the actual content of different tests, and biases due to different item formats or testing procedures, cannot be completely eliminated by standardization or equating procedures. The different tests used in Project TALENT, EEOS and NLS have been carefully compared and content or format discrepancies which vitiate to some extent comparisons based on specific instruments are noted in the discussion below.

Each of the three studies used a different, specially constructed test battery. Achievement tests in the important area of reading comprehension appear very comparable across the three studies. Some differences were noted, however, in the tests of vocabulary, "abstract reasoning," and mathematics, included in different batteries. The verbal/vocabulary test used in the EEOS

consisted of two subtests of equal length. The first used sentence completion items and the second, synonym items. Separate subtest scores were not available. Vocabulary tests used in TALENT and NLS match the second of these two subtests fairly well. No "abstract reasoning" test was included in NLS. The EEOS test in this area included classification items (selecting one of five stimuli which did not go with the others) and nonverbal analogy items. The TALENT test used series completion items. The comparability of these measures is not clear a priori, but they yielded very similar minority - White gaps after standardization. In the area of mathematics, TALENT and EEOS instruments appear to measure similar content, but items on the Project TALENT instrument were substantially easier. Differences of this kind should be compensated by the standardization procedure. The content of the NLS mathematics test was similar to that of the TALENT and EEOS instruments, but items were presented in a highly unusual, somewhat complex format which may have affected the instrument's characteristics significantly. As noted above, information tests were included only in the TALENT and EEOS batteries. Composite tests formed by aggregating TALENT subscales closely matched the five EEOS information tests.

In comparing test results across time, differences in the definitions of the populations represented and changes in the character of those populations, as well as differences in instruments, must be taken into account. The EEO survey included only students enrolled in public schools in fall of 1965, while NLS sampled both public and private school enrollees in spring of 1972. Project TALENT data also included both public and non-public school

enrollees, in spring of 1960, but codes for control of school permitted the construction and analysis of two Project TALENT files, one representing only public schools and the other representing the entire school universe. In figures 5.22, 5.23, 5.24, and 5.25, trends in minority - White achievement gaps across the three studies are displayed.[1] Where NLS as well as EEO Survey data are available, both the public - only and public - and - private Project Talent gap estimates for grade 12 are displayed. Where only EEO Survey data were available for comparison with TALENT, only public - school TALENT gaps are plotted.

As documented elsewhere in this report, there has been a dramatic increase over the past twenty years in the proportion of minority students completing high school. Other things being equal, if a larger fraction of low - achieving minority students stayed in school through the twelfth grade in 1965 or 1972 than in 1960, larger observed gaps would be expected at the later time points. In fact, smaller Black - White achievement gaps were observed at later time points than in 1960, suggesting that actual gains made by Blacks relative to Whites were more than large enough to offset this probable bias. Larger Hispanic - White achievement gaps were typically observed at later time points, suggesting either that the gap increased or that any reduction in the gap was overshadowed by the bias due to a decrease in dropout rate.

[1] Data on which Figures 5.22 to 5.30 are based are presented in Appendix J.

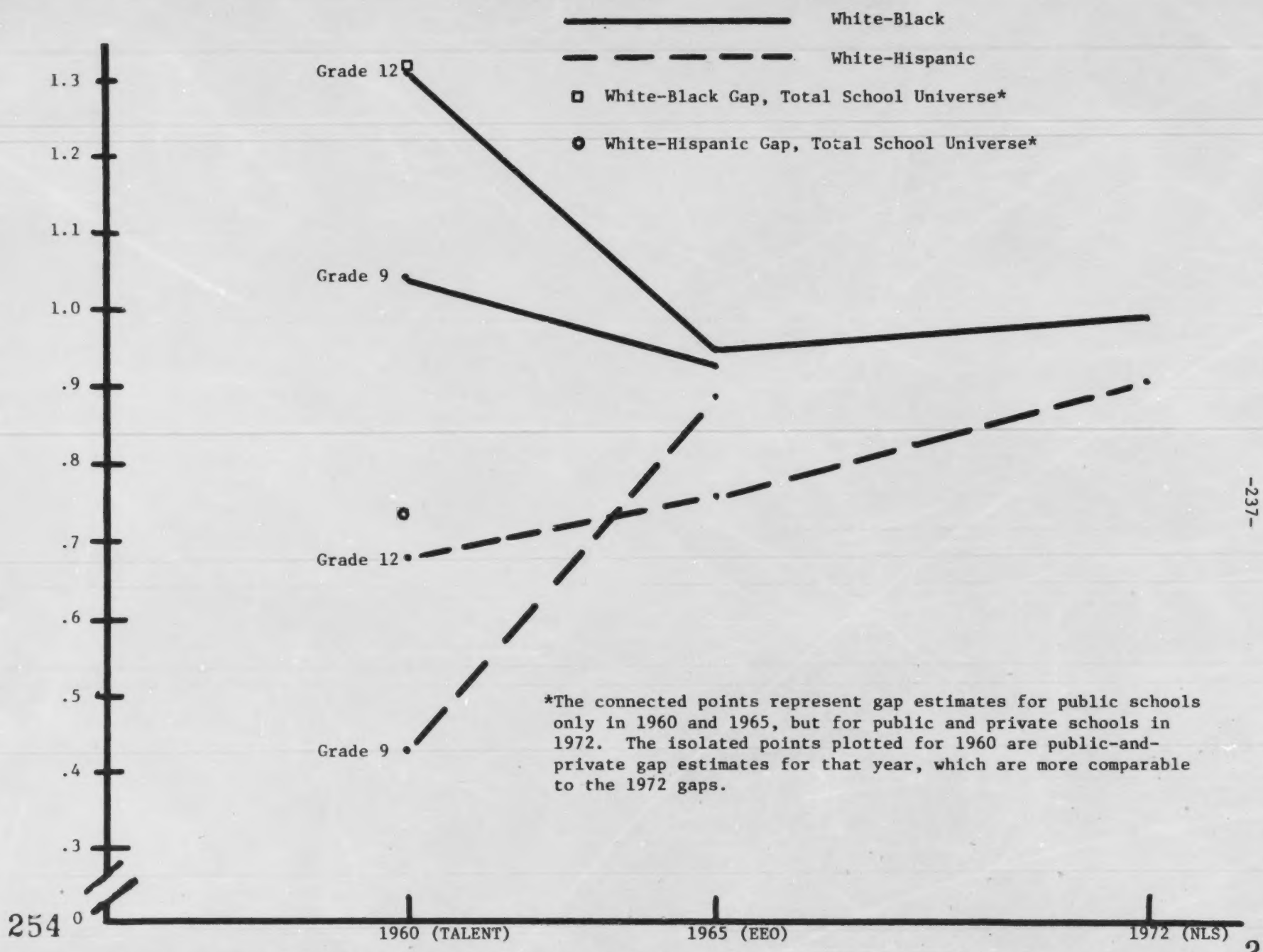


Figure 5.22 Reading Comprehension: Elementary School White-Black & White-Hispanic Gaps

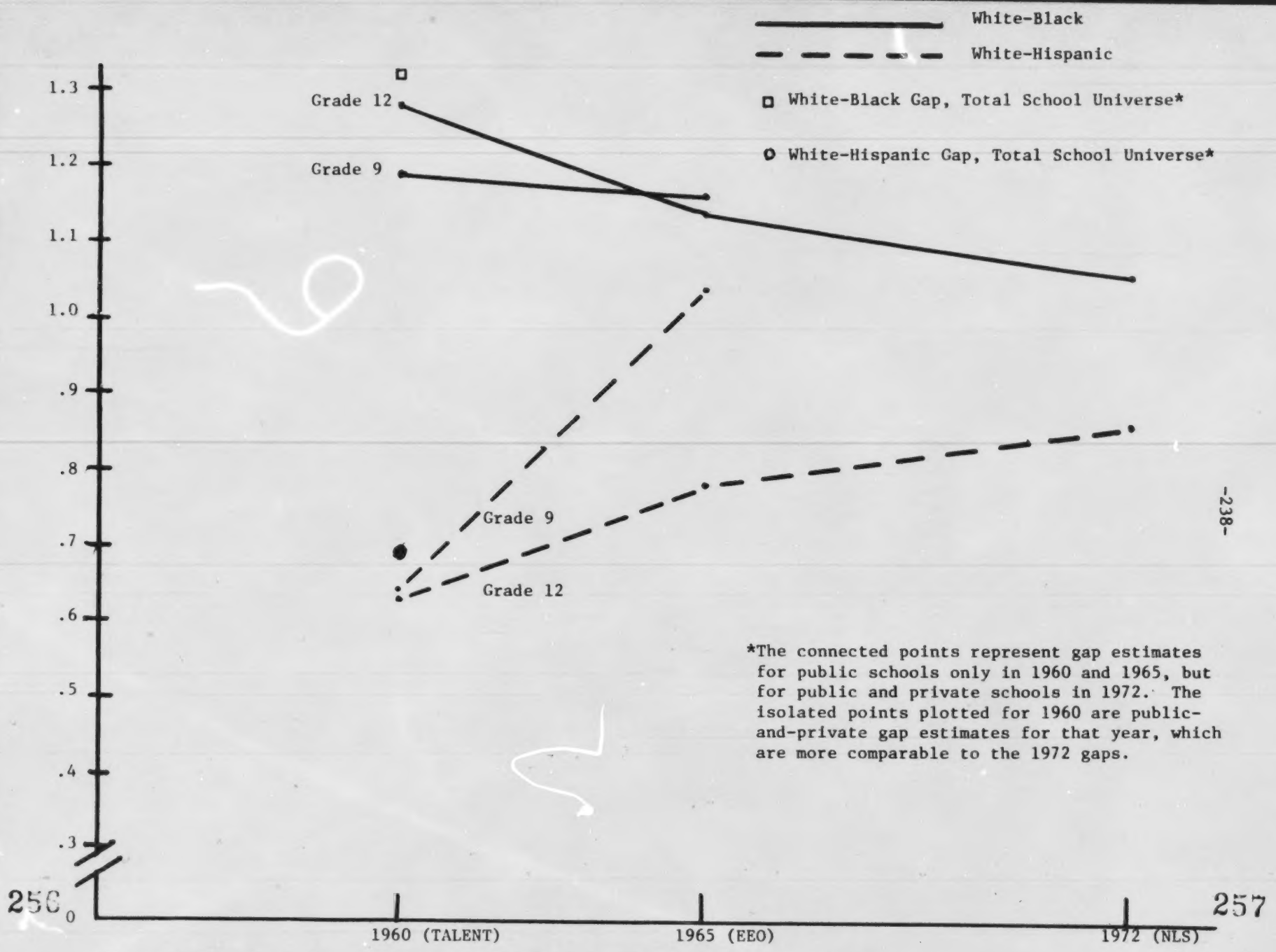
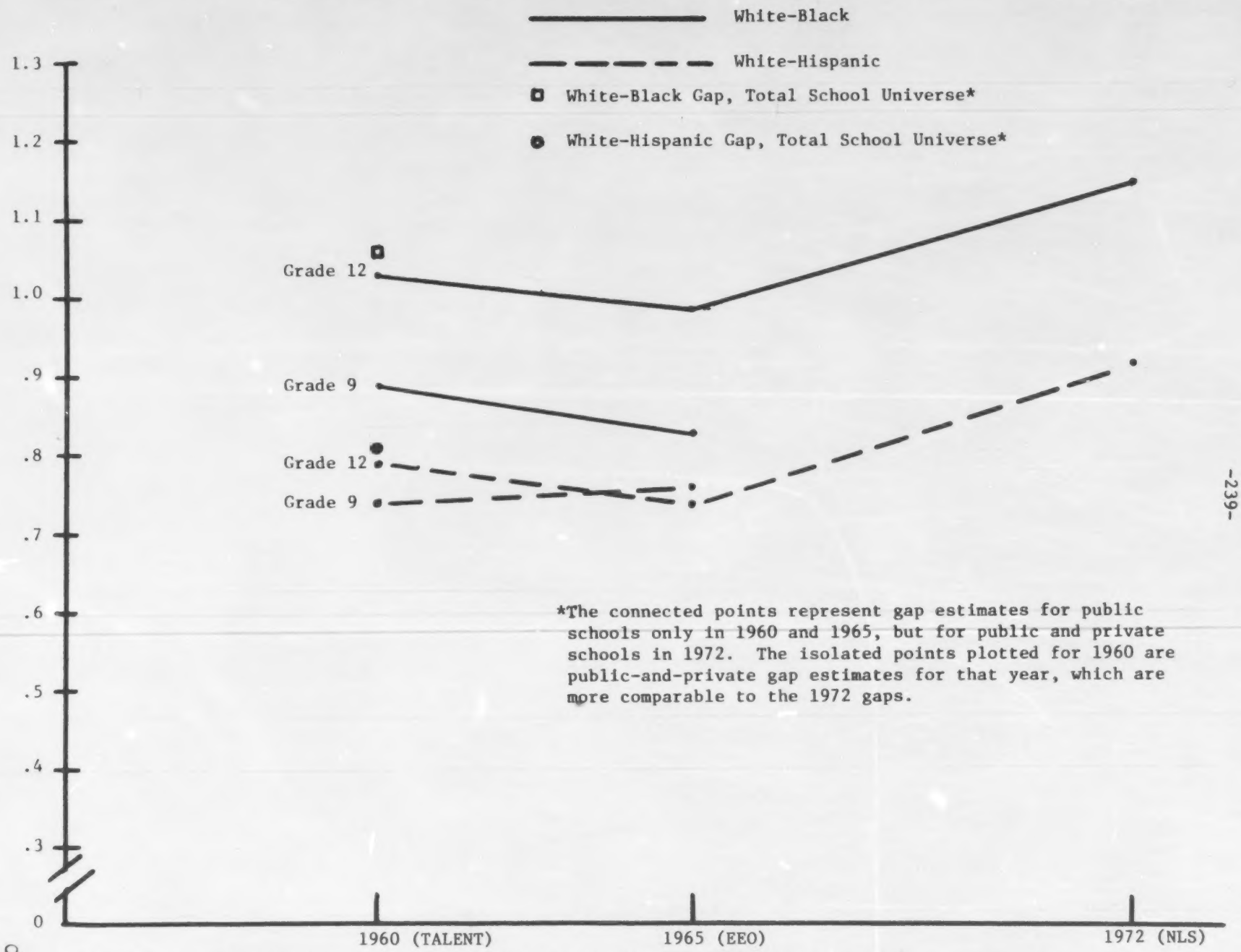


Figure 5.23 Vocabulary: Elementary School White-Black & White-Hispanic Gaps



*The connected points represent gap estimates for public schools only in 1960 and 1965, but for public and private schools in 1972. The isolated points plotted for 1960 are public-and-private gap estimates for that year, which are more comparable to the 1972 gaps.

Figure 5.24 Mathematics: Elementary School White-Black & White-Hispanic Gaps

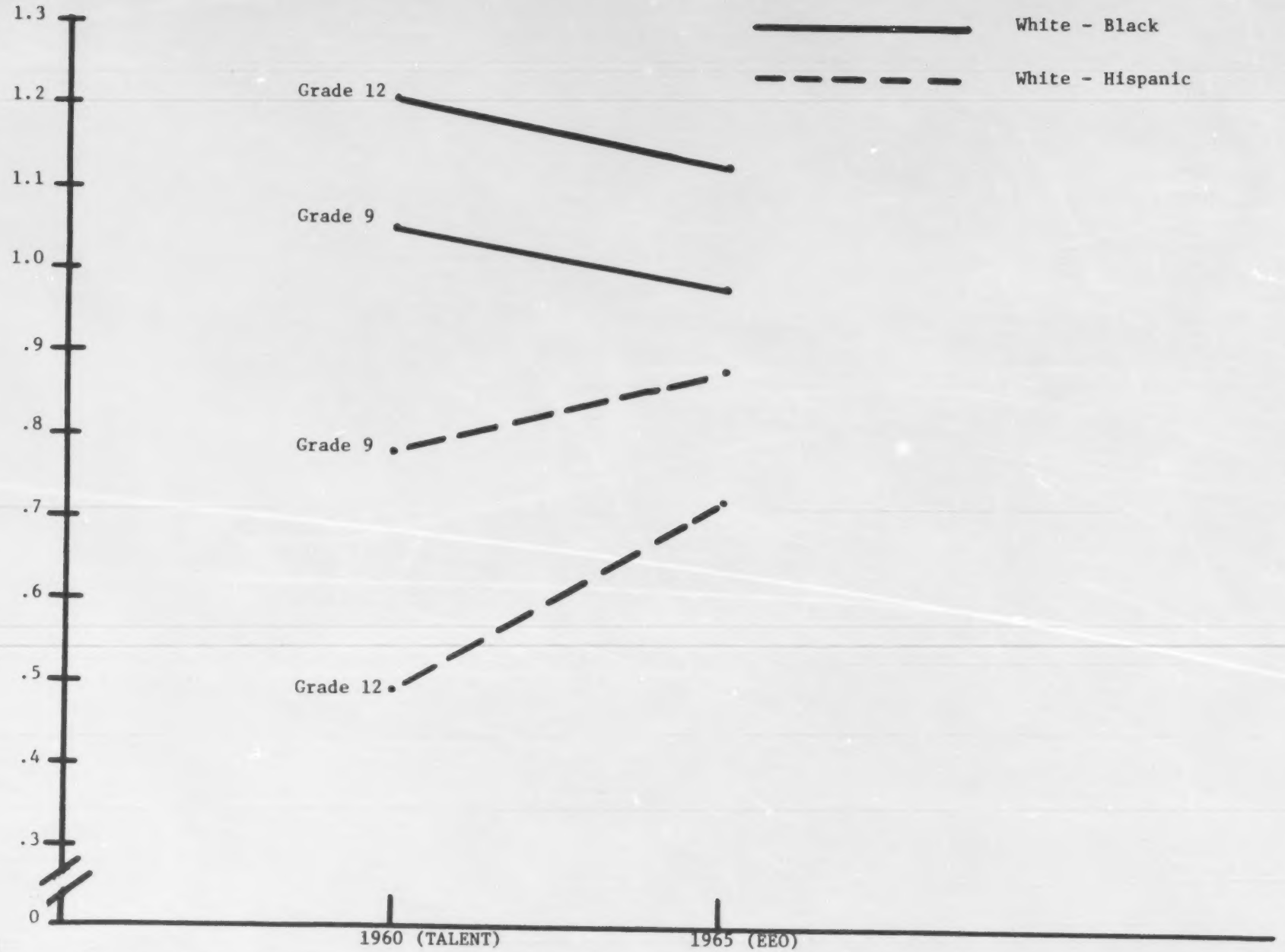


Figure 5.25 Abstract Reasoning - Nonverbal: Elementary School White-Black & White-Hispanic Gaps

Trends in Achievement

Available data at both the ninth and twelfth grade levels, across all four achievement areas, show that from 1960 to 1965 Black - White achievement gaps remained constant or decreased, while Hispanic - White gaps remained constant or increased. Changes in gaps were smaller between 1965 and 1972 than across the preceding five-year period.

The largest decreases in the Black - White gap were observed in the area of reading comprehension, where 1965 gaps at grades 9 and 12 were 10 percent and 27 percent smaller than in 1960. A slight increase in the Black - White gap at the twelfth grade level between 1965 and 1972 is shown in Figure 5.22, but is not large enough to warrent interpretation. NAEP data (Golladay and Noell, 1978) on reading performance of 17-year-olds in 1971 and in 1975 indicate no change in the Black - White gap over this later period. Thus, it appears that the Black - White gap in reading comprehension fell roughly 18 percent between 1960 and 1965, and then remained relatively constant, at least through 1975.

Average decreases in vocabulary, "abstract reasoning," and mathematics Black - White gaps were 7 percent, 7 percent, and 6 percent between 1960 and 1965. The increase in the Black - White mathematics gap between 1965 and 1972 is contrary to results in other areas and should not be accepted without additional supporting evidence, given the anomolous format of the NLS mathematics test.

Hispanic - White gaps increased between 1960 and 1965. Averaging the percent change in gap at the ninth and twelfth grade levels, Hispanic - White gaps increased by roughly 60 percent, 45 percent and 30 percent in reading comprehension, vocabulary, and "abstract reasoning," respectively. There was no significant change in the mathematics gap over this period. In reading comprehension and vocabulary, the largest increases in gap were at the ninth-grade level, as indicated by Figures 5.22 and 5.23. Hispanic - White gaps remained relatively constant betweeen 1965 and 1972. The slight increases for this period displayed in Figures 5.22, 5.23, and 5.24 reflect primarily the discrepancy between the public schools and the total school universe discussed earlier, and the distinctive format of the NLS (1972) mathematics test.

Over the entire period and over all content areas, Hispanic - White gaps have been substantially smaller than Black - White gaps. In 1960, Hispanic - White gaps in reading comprehension and vocabulary were roughly half as large as Black - White gaps, and "abstract reasoning" and mathematics gaps were roughly three-quarters as large. By 1965, Hispanic - White gaps were roughly 80 percent as large as Black - White gaps on all four tests.

Trends in Information

The five information tests available for ninth and twelfth graders in 1960 and 1965 showed mixed patterns of results, as shown in Figures 5.26 through 5.30.[1] On three of the five tests, natural science, social studies, and

[1]Data on which Figures 5.22 to 5.30 are based are presented in Appendix J.

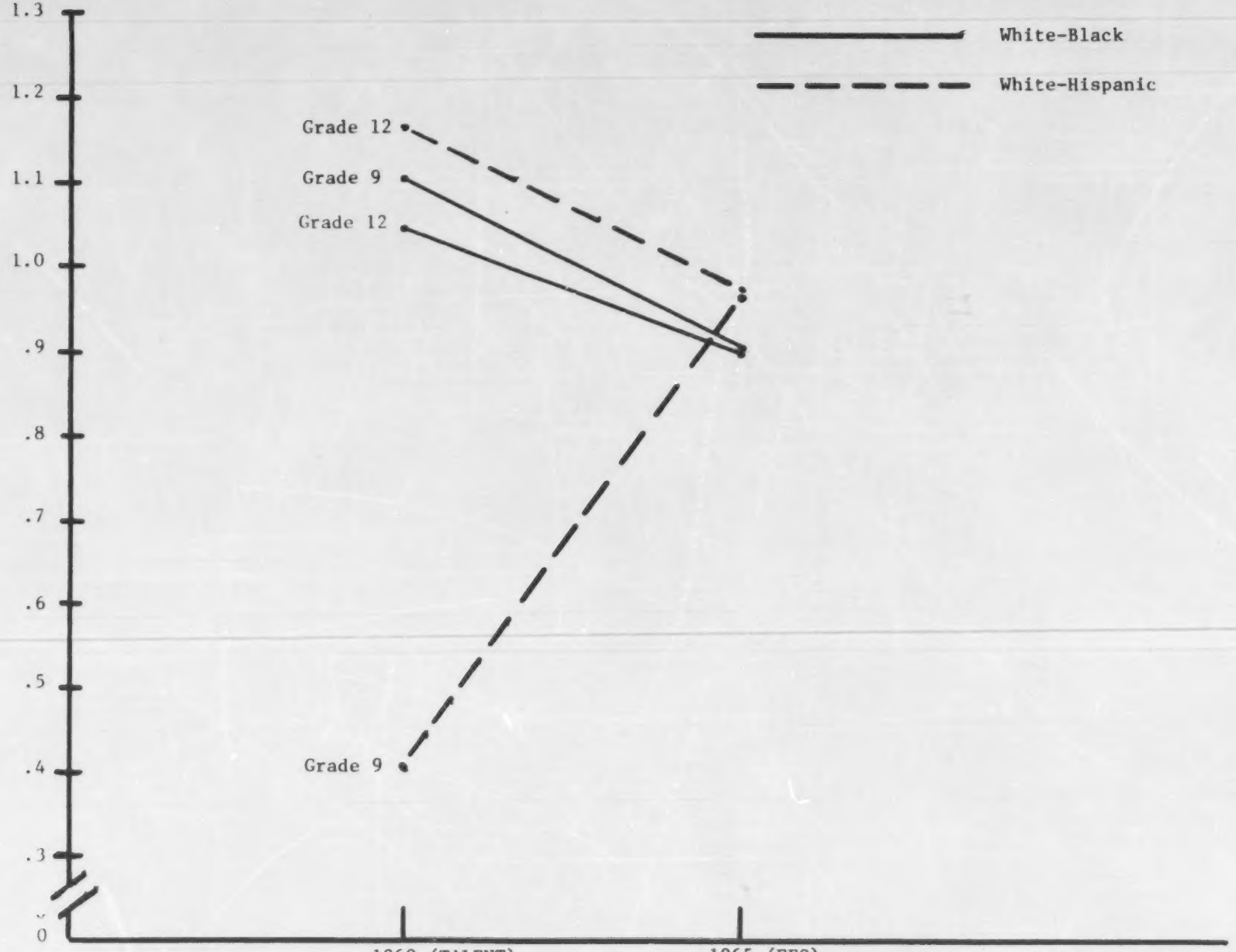


Figure 5.26 Practical Arts - Males: Elementary School White-Black & White-Hispanic Gaps

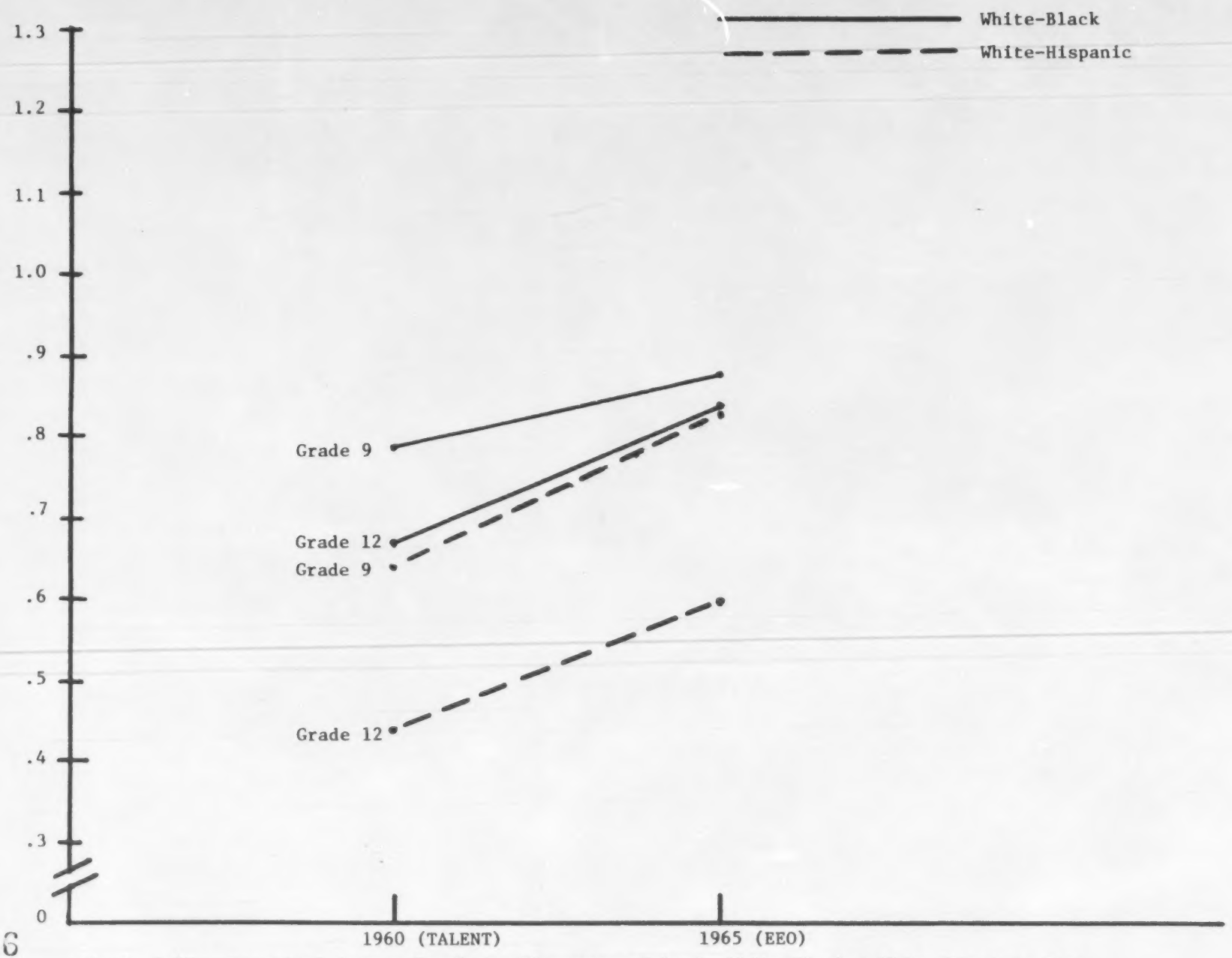


Figure 5.27 Practical Arts - Females: Elementary School White-Black & White-Hispanic Gaps

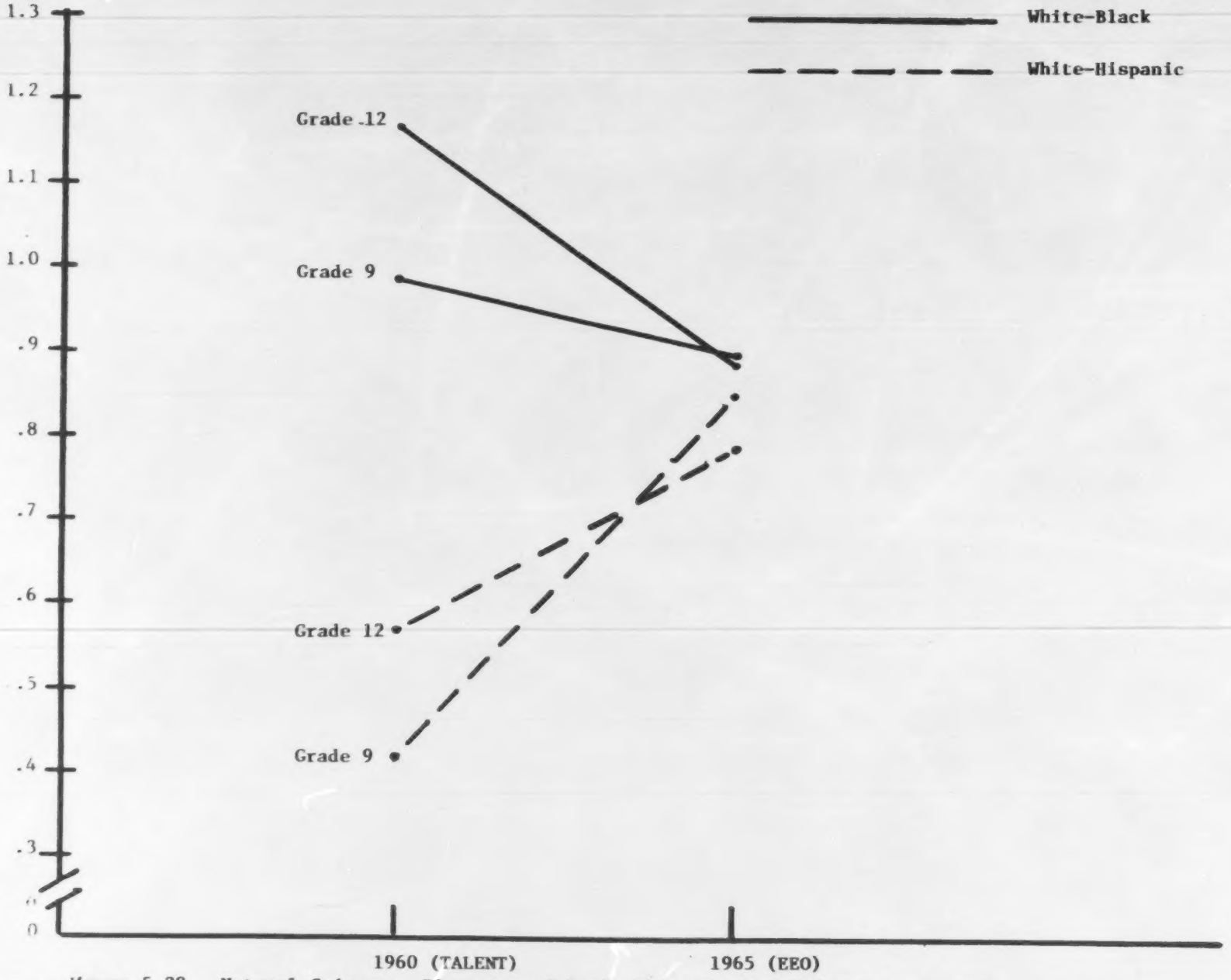


Figure 5.28 Natural Science: Elementary School White-Black & White-Hispanic Gaps

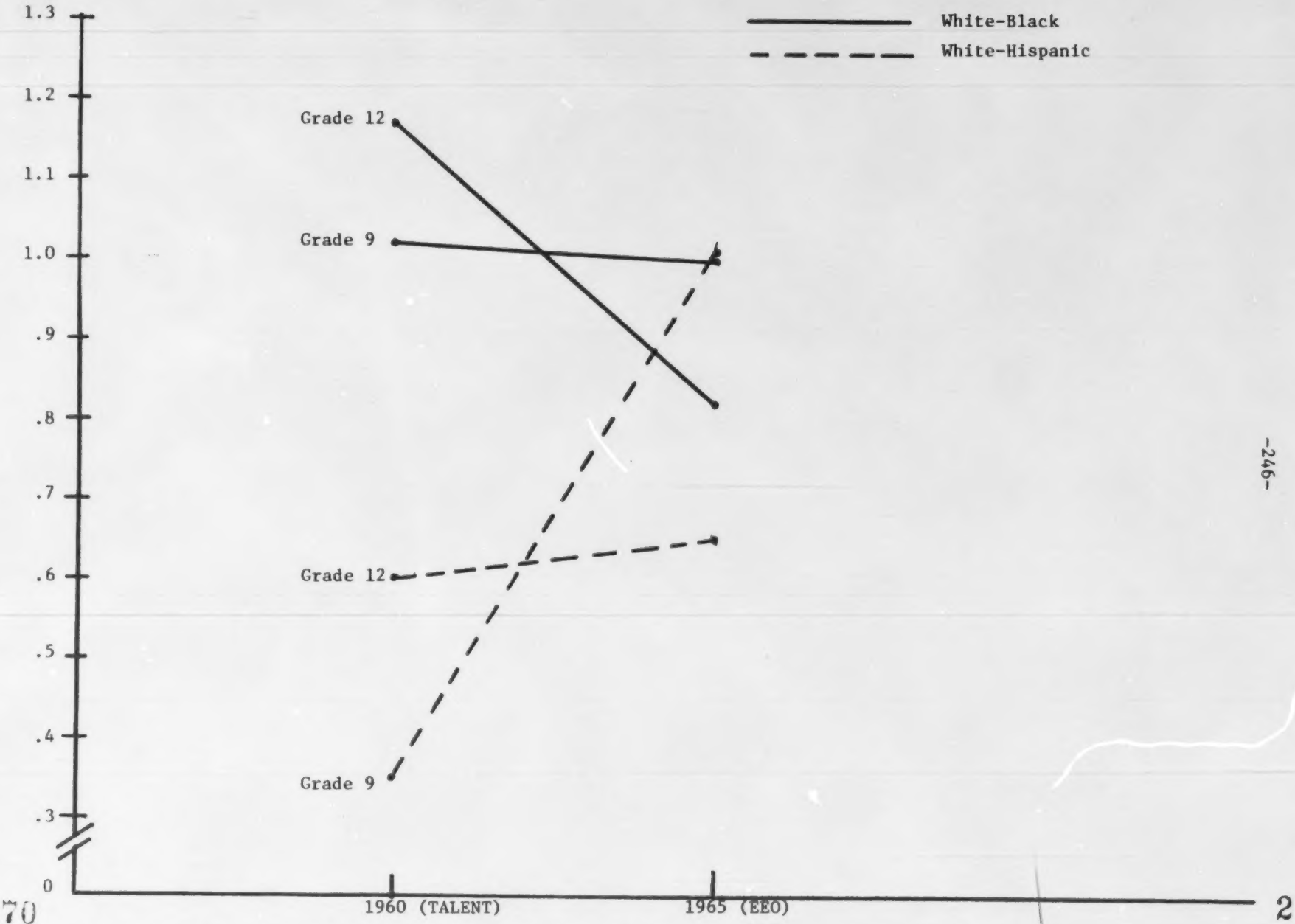
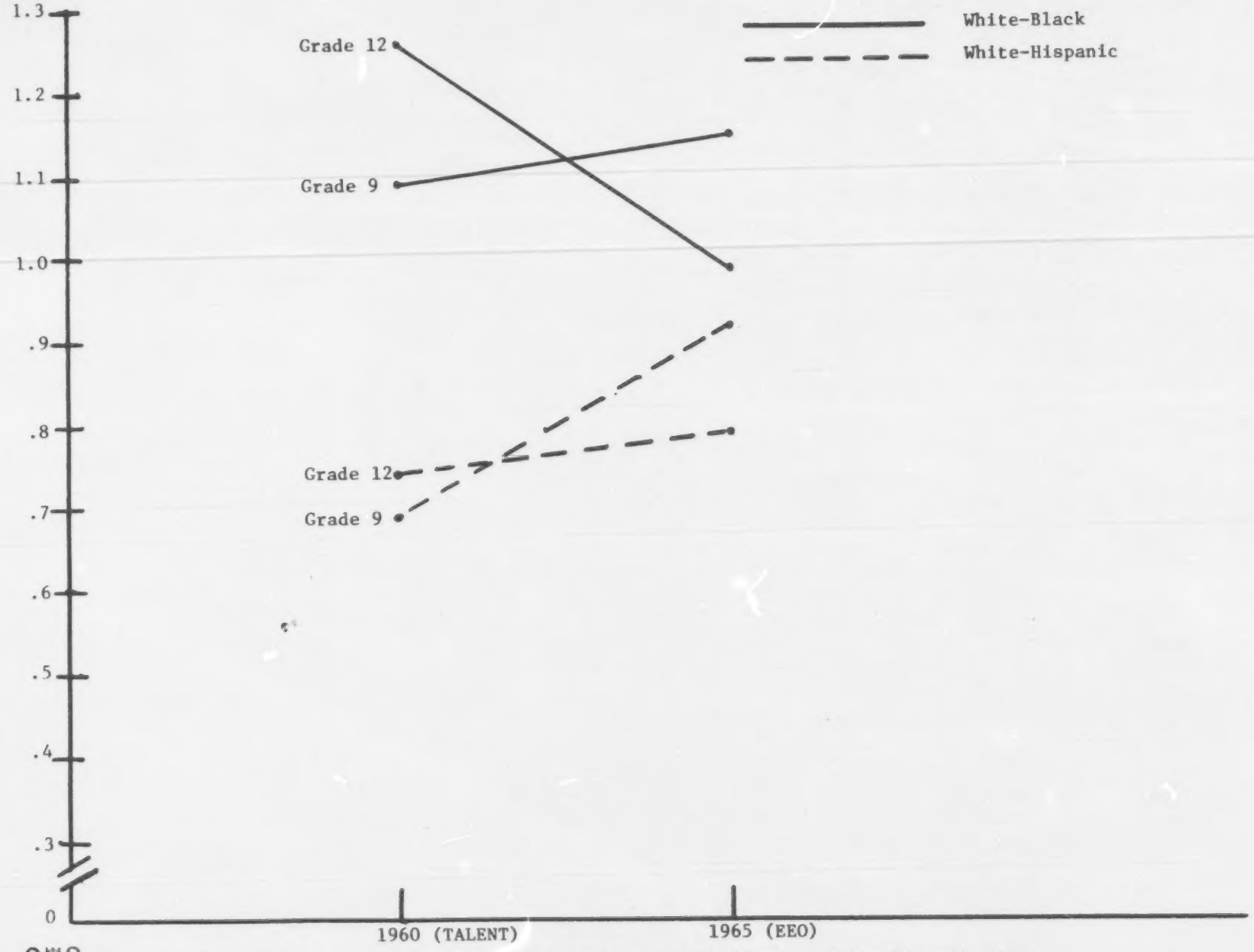


Figure 5.29 Social Studies: Elementary School White-Black & White-Hispanic Gaps



272 Figure 5.30 Humanities & Arts: Elementary School White-Black & White-Hispanic Gaps 273

humanities and arts, findings were similar to those for the achievement tests. In 1960, Black - White gaps were roughly twice as large as Hispanic - White gaps, but by 1965 Black - White gaps had decreased about 15 percent, and Hispanic - White gaps had increased to the point where they were from 80 to 90 percent as large as Black - White gaps. On all three tests, twelfth-grade gaps were larger in 1960, while ninth-grade gaps were larger in 1965. The only other nationally representative information on gaps in these areas at the secondary school level concern science achievements as measured in the National Assessment (NAEP, 1976). These data show statistically significant decreases in the percent of science questions answered correctly by both White and Black 17-year-olds between 1969 and 1973, but no change in the Black - White gap could be detected.

On the tests of practical arts for males, Black - White gaps at both the ninth and twelfth grade levels declined roughly 17 percent. The Hispanic - White gap for twelfth graders declined similarly, but the ninth-grade Hispanic - White gap increased from .4 standard deviation unit in 1960 to 1.0 standard deviation unit in 1965. On the tests of practical arts for females, minority - White gaps increased for both ninth and twelfth graders. The average increase across the two grade levels was roughly 17 percent for the Black - White gap, and 31 percent for the Hispanic - White gap.

Summary

Between 1960 and 1965, Black - White achievement gaps declined roughly 20 percent in reading comprehension, and 5 to 15 percent in vocabulary, "abstract reasoning," mathematical reasoning, and science, social studies, and humanities and arts information. On tests of practical arts, the Black - White gap declined roughly 17 percent for males and increased roughly 17 percent for females during the same period.

Hispanic - White gaps increased dramatically between 1960 and 1965, especially in reading comprehension and vocabulary, where increases were on the order of 60 percent and 45 percent, respectively. Similar changes were observed on the five information tests, where Hispanic - White gaps increased from roughly 20 to 100 percent over the same period. An increase of roughly 30 percent was found for "abstract reasoning," and no change was noted in the Hispanic - White gap in mathematics. These changes may reflect a significant immigration during the 1960's of Hispanic students poorly prepared for instruction in American schools.

With the exception of the tests of practical arts for males, all tests showed smaller Hispanic - White gaps than Black - White gaps. Typically, Hispanic - White gaps were 50 to 75 percent as large as Black - White gaps in 1960, and roughly 80 percent as large in 1965.

Data from NAEP and NLS indicate that there was little change in minority - White gaps between 1965 and 1975 in the areas of reading, vocabulary, mathematics and science, as all groups' scores declined.

6. Conclusion and Consequences

This study attempted to synthesize information bearing upon the quality of educational opportunities available to minority children over the past twenty years. Has the gap in educational services and achievement between minority and White pupils decreased? Is there evidence of effects of federal programs on pupils' learning opportunity and achievement? And what are the policy implications for education?

The information and data that we have analyzed and synthesized in order to answer these questions is naturally sketchy, and varies in strength of evidence. For example, very little general knowledge exists about preschool programs and findings about preschool effects are contradictary; within elementary and secondary education, we could draw on several natural achievement data bases, but information on the process of schooling, especially on resource use and educational services provided, is meager. Nevertheless, we believe that the information that we could bring together in this study elucidates educational efforts and accomplishment put forth during the past two decades.

6.1 The Societal Context

In order to assess quality of education for minorities, we had to consider the circumstances and changes therein, under which education and schooling occur. In particular, we attended to critical demographic changes in the racial/ethnic composition of the population and the geographic location of Blacks and Whites.

The massive Black migration from the South to Northern urban areas had practically ceased by 1965. Presently (1975), 53 percent of the Black population reside in the South. However, only one-fourth of the nation's Blacks (26%, 1974) live in rural areas and an approximately equal number (27%, 1974) reside in the nation's very large cities (over 1 million population). Thus, three out of four Blacks (74%) live in metropolitan areas. This also holds for Black children. However, the percentage of Black as compared to all children in a city rises dramatically with city size, reaching 97 percent in Washington, DC (1974).

These high concentrations of Black pupils in large cities are a consequence of Black in-migration, birth differentials between Blacks and Whites, and White out-migration. In general, White out-migration had the strongest effect on racial isolation, following by birth differentials and Black in-migration. Differential birth rates for Blacks and Whites will continue to account for considerable increases in the proportion of minority population. Between 1970 and 1976 the percentage of Black 5- to 14-year-olds as compared to all 5- to 14-year-olds rose from 13.6 to 14.9 percent. Although fertility levels for Black women are falling at the same rate as White women, fertility rates for Blacks are still higher, as they began at a higher level. Thus, the fact that Black children have increasingly become a racially isolated city student body demands serious consideration in the assessment of quality of education for minorities. The nation's central cities are faced simultaneously with declining enrollments and increasing proportions of Black pupils.

We can characterize the living environment of a Black child as typically being a city (53%, in 1976) while a White child typically lives in a suburb (44%). Black pupils in large cities find themselves increasingly racially isolated. But racial isolation is only a facet of the socializing and learning conditions they encounter. The other is poverty. Black poor families reside either in rural areas (33% in 1976) almost exclusively in the South, or in central cities (54%). The poorest still are the female-headed Black families, the percentage of which increased from 21 in 1955 to 35 percent in 1975, while remaining fairly constant for Whites. Two-thirds of children living in female-headed Black families were in poverty in 1974 as compared to 43 percent of such White children. Nationwide, about 11 percent of children under 18 years old lived in poverty during 1967 and 1975, however, over forty percent of Black children lived under poverty conditions. And although, in general, the gap between Black and White family income diminished between 1959 and about 1967, it has remained constant since,with Black family income at about 60 percent of White. It seems that only recently the gap has closed somewhat more. However, this is mostly due to Blacks with higher educational attainment. The poor, a very high percentage of whom are Black, are becoming poorer, and this trend holds for poor White families as well. Thus central city schools are not only becoming racially more isolated, but it seems that, on the whole, they are suffering from increasing social class isolation. Large numbers of the pupil population of public central city schools live in low-income families; their parents have relatively little education and work in occupations with low status. This is, irrespective of racial and ethnic characteristics, the disadvantaged population.

This requires a basic reconsideration of desegregation. The root of the problem is social-class segregated housing, which determines to a large extent the quality of education, because it severly determines school district resources and pupil composition in schools and districts. Another factor homogenizing pupil composition in public schools is the availability of private schools. However, the picture has to be differentiated for the three levels of schooling: preschool, elementary and secondary school.

6.2 Preschool Education

Preschool education, or more precisely prekindergarten education, has traditionally been in the private sector. Prior to 1964, i.e., prior to Head Start, virtually no federal money was being expended on education services or programs for such young children. Although the scene has changed since the midsixties, the typical preschool setting is still a private school, and we estimate that parents with preschool children in private schools spend more than $1.2 billion per year, which is about twice the total amount spent by the federal government on preschool services in 1977.

The major federal program serving preschool children is Head Start, although Head Start serves less children than ESEA Title I (in 1977, Head Start 349,000, Title I 367,000). But Title I funds are supplementary, while Head Start pays the full cost of children's preschool education. This is reflected in the cost per child which for Head Start is over three times the amount for Title I (in 1977, Head Start $1,283; Title I $371).

Head Start has never been a fully funded program, i.e., there are many more eligible children than children served. If we compare the Head Start budget obligations to federal funds at the elementary and secondary levels (ESEA Title I) and in higher education, then preschool education is treated like Cinderella by the federal government. Since 1967 and up to 1977, funds have increased little, if we compare them to federal expenditures at other educational levels. The number of children served has decreased, and this during a time in which the percent of private preschool enrollment has tripled. The enrollment increase in private preschools indicates a growing interest of parents in preschool education. The federal government has not responded to this with funding increases which would open more preschool opportunities to children from poor families. Some states, especially California, and New York, have, however, instituted and/or expanded public pre-kindergarten educations.

Head Start is intended to serve the poor and disadvantaged. Funds are distributed to Head Start centers all over the country. This center funding has resulted in strict social-class and considerable racial segregation. Social-class segregation, because of the eligibility criterion (poverty) and racial segregation, because large numbers of the poor are Black. This, together with housing segregation, is responsible for the fact that Head Start and other public pre-kindergarten programs have increasingly been serving minority children, especially children with unemployed parents, while White children, especially children from white-collar families, have increasingly been enrolled in private tuition-based programs. Thus, as more public and private opportunities for preschool, i.e., pre-kindergarten, become available, racial segregation unfolds.

Black preschool enrollment of 3- and 4-year-olds has become increasingly social class differentiated. Between 1970 and 1975, enrollment rates for Black children in households headed by either high school dropouts or college graduates increased more than 150 percent, while the rates of children of high school graduate increased by only 11 percent. Clearly, the dual system of publicly supported education based on low-income eligibility and tuition-based private preschool education is increasingly creating social-class segregation among Black children and limiting educational opportunity in the lower middle class.

This pattern does not hold for kindergarten education. Although kindergarten, like preschool education, is not mandatory in any state, most states require kindergarten offerings or make offerings voluntary. I.e., kindergarten enrollees are supported like elementary school children by public funds. As a consequence, 5-year-olds have uniformly high enrollment rates and the public/private school situation as well as the racial and social-class composition of students is similar to that in elementary school, especially as kindergarten usually is physically a part of elementary schools.

Five-year-old minority and White children are enrolled in kindergarten at about the same rate (81.4% with an additional 10.6% in elementary school). This, however, is a relatively recent accomplishment. Up to the late sixties, Black children used to have considerably lower enrollment rates than Whites. This enrollment differential was a consequence of differences in opportunity. Many Southern states did not offer kindergarten, and, as most of the Black children resided in the South, Blacks were deprived of kindergarten education to a higher extent. Presently, Mississippi is the only state not offering kindergarten in the public schools.

While kindergarten is typically a half-day program, although full-day programs are increasing, pre-kindergarten programs tend to be full-day when public, and half-day when private. This implies that large numbers of Black 3- and 4-year-olds attend full-day preschool programs and drop to a half-day kindergarten program when they are five years old. This pattern of school offering seems obsolete, especially with the increasing work participation of mothers (54% of Black and White mothers). The differential program length of public and private preschools also implies that Black children receive more schooling than White children.

Has this substantial increase in school enrollment and quantity of schooling decreased the performance gap between Black and White children at elementary school entry? Although direct evidence is unavailable, recent analyses of preschool programs have demonstrated positive impacts, and long-term advantages in test-performance. If such programs have greater effects on disadvantaged children, then Black-White gaps in school readiness may have decreased.

6.3 Elementary and Secondary Education

If preschool education has positive effects on student performance, then elementary school teachers should have an easier start. Actually, school entrance skills have increased, in general. But teachers, schools, and districts face extremely different situations depending on where in the country they are and on the composition of their student bodies. Also the

general "headstart" in skills that first graders have recently acquired is progressively lost. Beginning with grade 5, achievement test scores have been declining for the past decade and the decline is larger the higher the grade level. Does that mean that elementary and secondary schools not only are unable to profitably build on preschool education, but instead have fallen behind, compared to the early sixties? At that time there was less preschooling, but achievement scores of upper elementary and secondary pupils were higher. What has been the effect of the federal funding programs, most of which are directed towards educationally disadvantaged pupils?

Resources. There are eight federal education programs that serve minority pupils--enrolled in elementary and secondary schools--to a greater degree than their representation in the population. Although Congress did not specifically draft legislation solely to aid any given minority group, the specification that funding be directed toward children from low-income families or with non-English speaking background, and toward school districts with racially isolated pupils, has resulted in proportionately more resources flowing to minority pupils. In 1978 along, these programs had appropriations of almost 4.6 billion dollars and if Labor Department and other programs administered outside of the Office of Education were added, the total would be far higher.

These resources have increased substantially since the midsixties, although in recent years the levels of increase have not greatly exceeded the rate of inflation for any funding program and have fallen short of that rate for most.

Funds for compensatory education constitute a major share of federal aid for elementary and secondary education. Although Congress, through the National Institute of Education, has spent 15 million dollars on research that would inform about crucial aspects of allocation, use, and effects of these funds, it is still extremely difficult to compose a picture of "quality of education." However, some cornerstones, which might turn out to be stumbling blocks, can be spread over the scene.

In assessing what the federal resources spent on elementary and secondary education have been purchasing, we again have to draw attention to the changing conditions that schools and districts encounter. While enrollment has been declining since 1968/69 and the declines now (1978/79) have reached eleventh grade, the percent minority in the student population has been increasing because of differential birth rates for Non-Whites and Whites. And, as indicated earlier, these, mostly Black minority pupils are concentrated in large cities, and in the South. The school districts of the twenty largest cities enroll one-third of the nation's Black pupils in grades 1 through 12. Poverty in these districts is also high, as it is in the South in general, where the majority of Blacks reside.

If we consider districts located in the South, and central city districts, the neediest, are these districts receiving a major portion of federal money? Yes, they now do. While in the late sixties federal funds were mostly going to high poverty districts, with Whites constituting the majority of pupils, since then

federal funds have increasingly gone to districts with high percentages of Black pupils, i.e., to the South and the central cities. We find, especially, if we include federal money for vocational education, which to a high extent goes to Black students, that federal educational programs concentrate on the education of Black pupils.

But what share is the federal contribution to districts' total expenditures on elementary and secondary education? Astoundingly small and becoming smaller. In general, federal aid was, in the 1967/68 school year, contributing 8.8 percent to local school budgets. In 1975/76 federal aid was only 8.0 percent of total school district revenue. During the same period, the proportion contributed by state revenue increased from 36.5 to 43.7 percent. This indicates that local districts always had to raise most of the revenue for education, but that their burden slightly decreased between 1967/68 and 1975/76 (52.7% to 48.4%).

But local revenues have shown increasing disparities nationally, a great concern for the school finance reform movement. As poor and Black children tend to be located in the less wealthy central city and rural districts, it is apparent that local revenues flow to White pupils out of proportion to their population representation. As these revenues constitute the majority of school resources and as they have become more unequal over time, it is apparent that the Black-White resource gap has increased.

Enrollment and Grade Retention. For the past ten years, Black children have enrolled in school to the same extent as Whites. Proportionately, in 1966, about 2.6 times as many 10 to 13 year old Blacks were not enrolled as Whites (1.8% vs. 0.7%). This ratio dropped to 1.6 in 1967 and has been about 1.0 since that time.

Black children begin elementary school earlier than Whites. In 1969 about 11.2 percent of Black 6 year olds were already beyond first grade and only 5.9 percent were not yet enrolled or in preelementary schooling. The corresponding 1969 figures for Whites were 8.7 percent and 6.3 percent respectively. This entry discrepancy has continued through 1976.

The difference in age/grade relation between Blacks and Whites changes systematically as children become older. As the children progress through the system, Blacks steadily lose their advantage drawing even with Whites at about age 9 (1969) or 10 (1976) and then dropping behind. By age 16, median grade placement for Blacks is about 30 percent of a grade lower than that for Whites.

Why does this systematic retardation occur? One obvious explanation is that Black children are more frequently retained in the same grade for more than one year. This is, in fact, the case. However, there has been a trend toward automatic promotion for both White and Non-White pupils, which reduced the gap to retention rates between 1960 and 1970. Although this trend continued into the 1970's, there has been no further reduction, retention for Non-Whites being about twice that for Whites.

6.3.1 Elementary Education

Quantity of Schooling. In general, White pupils are offered more days of schooling per year than Blacks. Hispanic pupils, however, have, on the average an even shorter school year than Blacks. This finding is due to concentration of pupils from minority groups in certain locations in the country. Hispanics also tend to have the shortest school day, while Blacks, on the average, are offered longer school days in grades 2 to 6 (and kindergarten) than Whites who typically have slightly longer school days in grades 1, 7, and 8. However, the greater quantity of schooling offered Blacks and their lower rate of attendance offset one another, so that Blacks and Whites are exposed to essentially equal amounts of schooling in grades 2 to 6, though Whites are exposed to more in grade 1 and Blacks to more in kindergarten. Hispanics are offered least instruction and have the lowest attendance rates.

Compensatory Education. In 1976, about 87 percent of all public elementary schools were receiving some combination of federal, state, and local compensatory education monies. This funding affects traditional classrooms in several ways: class sizes are reduced; aides are added, reducing the child-adult ratio; students may be seen outside their classrooms by special teachers ("pull-out" programs). Funds are primarily concentrated in basic skill areas (reading, mathematics). Between 20 and 25 percent of instructional time of students designated to receive compensatory education was devoted to such compensatory services. Due mainly to "pull-out" programs, compensatory education services resulted in lowered class sizes for both compensatory and non-compensatory

education students. We can thus assume that ESEA Title I funds were also benefiting pupils not designated for such services. And funds are clearly reaching pupils considered disadvantaged. For each racial/ethnic group, the percentage of students selected is higher among poor students.

In Fall 1976, 44 percent of Hispanic, 35 percent of Black and 21 percent of White pupils were selected for some type of compensatory education. But the minority selection rates vary considerably by source of funds. Although about 50 percent more pupils were selected for Title I programs than for CE activities not supported by Title I, over 200 percent more Black pupils were selected for Title I and only 18 percent more White pupils. Hispanics were selected at about the same rates for both types of programs. This resulted in a considerable difference in racial/ethnic composition of these programs. Title I children are 25 percent Black while other compensatory programs are only 12 percent Black.

Instructional Exposure and Setting. Pupils generally are offered more instruction than they attend. The amount of reading instruction offered to Whites declines steadily from first (332 hours per year) to sixth grade (173 hours). In the first grade, minority pupils are offered less reading instruction (-9% for Blacks, -19% for Hispanics) but by the second grade Blacks are offered relatively more instruction and by the sixth grade their offerings exceed those of White pupils by 17 percent. Hispanics are offered more reading instruction than Whites by third grade and by sixth grade the differential has reached 45 percent. The latter probably reflects increased focus on English proficiency.

All racial/ethnic groups are offered less mathematics than reading instruction. For Whites, mathematics offerings drop slightly with grade level, from 176 to 162 hours per year. Black pupils begin school with 4 percent more offered mathematics instruction than Whites, but the amounts first rise slightly and then fall back to about the initial level by sixth grade where they exceed White offerings by 12 percent. Hispanic offerings start lower than Whites (-8%) but rise steadily, exceeding those of Whites by 16 percent in sixth grade. Although attendance rates for minority groups are lower than those for majority pupils, the differences are small enough that patterns of actual exposure to instruction are similar to offerings.

Figures for 1965 (EEOS) and 1972 (Anchor) demonstrate the change in class size for minorities. In 1965, White students attended classes of 29 students, on the average; Blacks attended classes of 32, and Hispanics attended classes averaging 31-33 students. Minority students were enrolled in classes 10% larger than those of Whites. By 1972, class size was 29.6 for both Blacks and Hispanics, only 3% larger than the 28.9 students in classes attended by Whites. This change reflects at least part of the impact of CE funding on elementary schools.

For 1976/77, available figures are not directly comparable with earlier ones because of a focus on the class and group sizes pupils actually experience, including pull-out and special instruction. However, the available evidence points to slightly smaller effective class sizes for minorities in the early

elementary grades and substantially smaller ones by the sixth grade. Individualized (tutorial) instruction is more extensive for majority pupils in the first grade but this pattern is reversed by grade six. It is important to note, however, that this time pattern is almost precisely paralleled by that for unsupervised learning experiences (seatwork), reflecting the fact that teachers have only limited time and when they devote it to turoring some pupils, others remain unsupervised.

The amount of instruction received from a teacher other than the classroom teacher (pull-out or other specialist) varies considerably. Instruction of this kind in reading averages between 96 hours (first grade) and 107 hours per year (sixth grade). Overall, there is much less instruction by specialist teachers in mathematics (20 hours). In both reading and mathematics, and at all grade levels, Hispanic students spend the most time in instruction with a non-regular teacher; Whites spend the least. However, for Blacks, the differential is not great for reading, but is substantial for mathematics and increases with grade level, reading more than a 2 to 1 ratio by sixth grade.

Achievement. Between 1972 and 1976, the Black/White achievement gaps in vocabulary and reading comprehension at the upper elementary level decreased by 9 to 13 percent. Between 1965 and 1972 Black/White gaps in these areas may have increased, but alternative explanations of observed increases are possible. The Hispanic/White achievement gaps in these areas have shown a different

pattern. Between 1965 and 1972, Hispanic/White gaps fell roughly 23 percent in sixth grade vocabulary and reading comprehension, but these gaps increased again by roughly 8 percent between 1972 and 1976. In mathematics achievement, limited data suggest that the Black/White achievement gap fell roughly 4 percent and the Hispanic/White fell roughly 8 percent between 1965 and 1976. Thus, although achievement test scores for upper elementary grades dropped, in general, during this time period, on the whole, the achievement differential between minority and White pupils in elementary school decreased.

6.3.2 Secondary Education

Schooling. To assess Black/White differences in secondary school process we examined the nature of coursetaking, the subject areas of enrollment, the type of track, the degree of homework required and completed, the class sizes, and the hours of instruction offered. In 1960, sizeable differentials in these measures were observed. Between 1960 and 1965 it appears that considerable closure took place, and by 1972, gaps in hours of instruction offered (though not attended), as well as time spent on homework and general categories of courses taken all achieved parity or favored Blacks, whereas previously Whites had been receiving preferential treatment. However, class sizes for Blacks never reached parity with Whites--in fact the gap remained constant -- and Whites as compared to minorities are still over-represented in college preparatory tracks--although the discrepancy in assignment rates dropped 26 percent between 1960 and 1972. Hispanic students, in general, seem to be worse off then Black

students. Blacks predominate in vocational/technical tracks. To the extent that parity in hours of instruction offered, time spent on homework, and types of courses are taken as reflective of the quality of the educational process, we can conclude that the racial gap in quality of secondary education has narrowed, but parity has not been achieved as indicated by continuing discrepancies in curricular track assignment and class size.

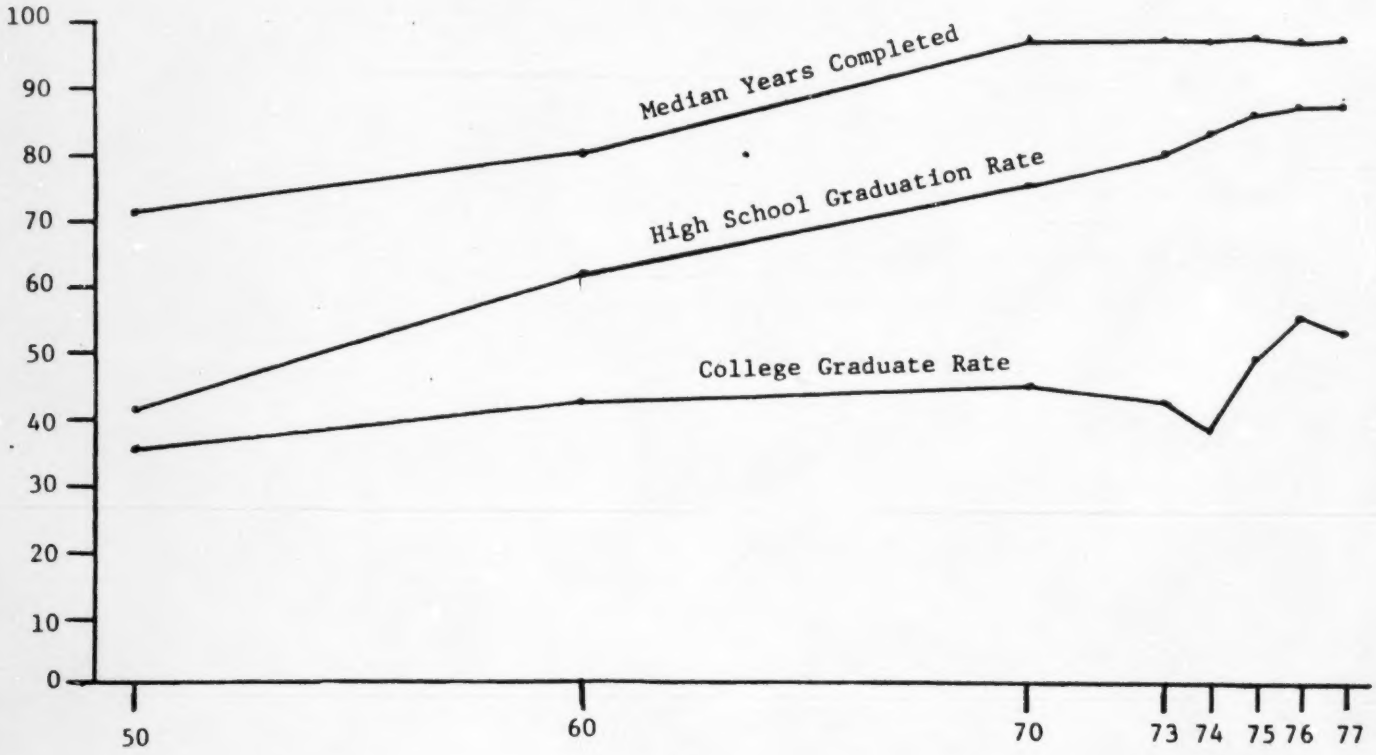
Achievement. Between 1960 and 1965, Black/White achievement gaps declined roughly 20 percent in reading comprehension, and 5 to 15 percent in vocabulary, "abstract reasoning," mathematical reasoning, and science, social studies, and humanities and arts information. On tests of practical arts, the Black/White gap declined roughly 17 percent for males and increased roughly 17 percent for females during the same period. Hispanic/White gaps increased dramatically between 1960 and 1965, especially in reading comprehension and vocabulary, where increases were on the order of 60 percent and 45 percent, respectively. Similar changes were observed on the five information tests, where Hispanic/White gaps increased from roughly 20 to 100 percent over the same period. An increase of roughly 30 percent was found for "abstract reasoning," and no change was noted in the Hispanic/White gap in mathematics. With the exception of the tests of practical arts for males, all tests showed smaller Hispanic/White gaps than Black/White gaps. Typically, Hispanic/White gaps were 50 to 75 percent as large as Black/White gaps in 1960, and roughly 80 percent as large in 1965. It seems that there was little change in minority-White gaps between 1965 and 1975 in the areas of reading, vocabulary, mathematics and science, as all groups' scores declined.

6.4 Consequences of Schooling

Although this study focusses on quality of education from preschool through high school only, we selected a few indicators of attainment to show possible consequences of elementary and secondary schooling for pupils' later life. By no means do we assume that the indicators described below are solely or even most strongly influenced by elementary and secondary education. Many other societal factors such as open enrollment in colleges and affirmative action are influential. However, we do assume that elementary and secondary education also contribute to these indicators of attainment for minority as well as majority members.

In 1950, Blacks were completing only a median of 8.6 years of education. An astounding 80.4 percent dropped out of high school, and only 19.6 percent graduated. By 1977, Blacks completed a median of 12.6 years of schooling (vs. 12.9 for all persons), the dropout rate had been reduced to 25.6 percent, and the percentage of high school graduates had increased to 74.4 percent. Although these percentages are not yet at the level for all persons (14.6% dropout rate, 85.4% high school graduation rate), they reflect dramatic change. In 1977, a Black, 25 to 29 years old, was 87 percent as likely as a person in that age range generally to have graduated from high school (Figure 6.1).

Figure 6.1 Indicators of Educational Attainment, Black as a Percent of White Level, 25-29 Year Olds, 1950-1977.

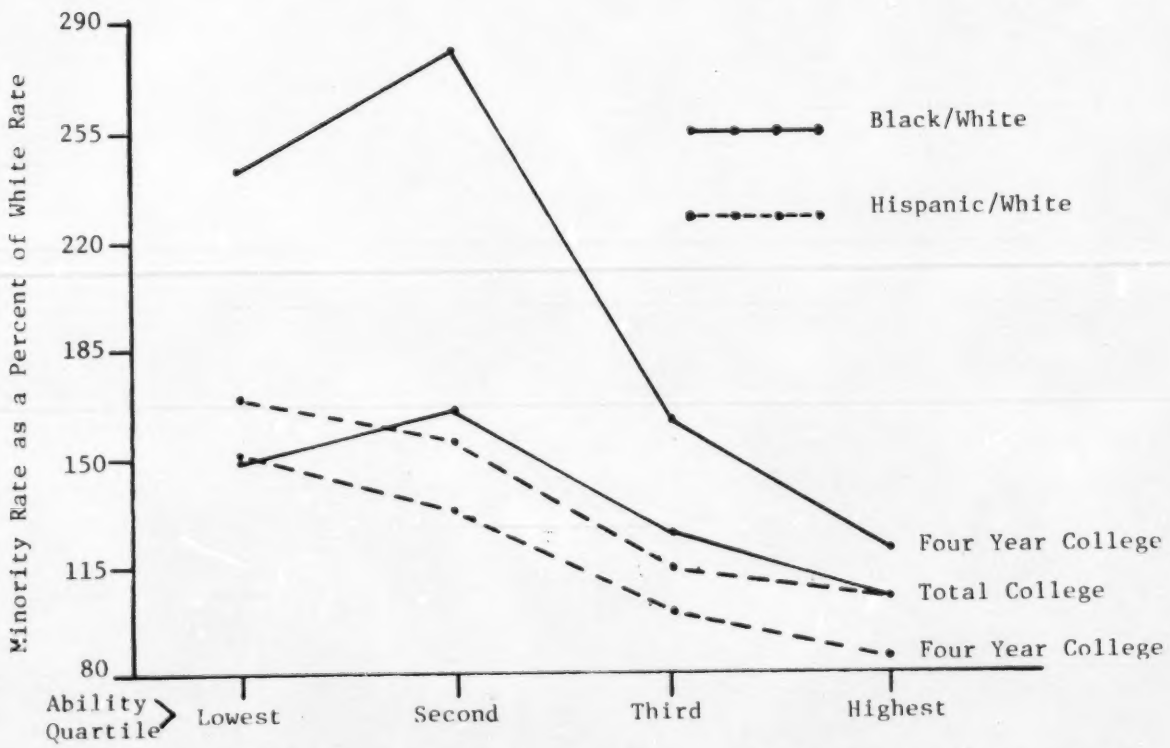


Source: Statistical Abstracts, various years.

Further, examining college enrollment of the population 18 and 19 years old, by race, in 1960 Whites were over twice as likely as Blacks (29.4 vs. 14.5%) to be enrolled in college. By 1975, the rates had increased for both groups, and Whites were only 50 percent more likely (38.1 vs. 25.3%) to be enrolled (OMB, 1976). Over almost the same period (1960 to 1976), discrepancies in Black-White graduation rates shifted from a ratio of five to one to a ratio of only three to one (U.S. Commission on Civil Rights, 1978).

What are the reasons for this dramatic increase in the educational attainment of Blacks? Does it rest on the increase academic skills, relative to Whites, that we documented above? Answers are difficult to come by because of the lack of availability of longitudinal data. One clear fact is that by 1972, Black high school graduates of the same tested ability as Whites had a better chance of attending college (Figure 6.2). The discrepancy is quite large, especially at low ability levels. As it seems unlikely that Black students had the same relative advantages in 1960, one can strongly speculate that at least part of the increases in college going by Blacks is attributable to augmented opportunity brought about by changes in counseling, admissions requirements and procedures, and financial aid.

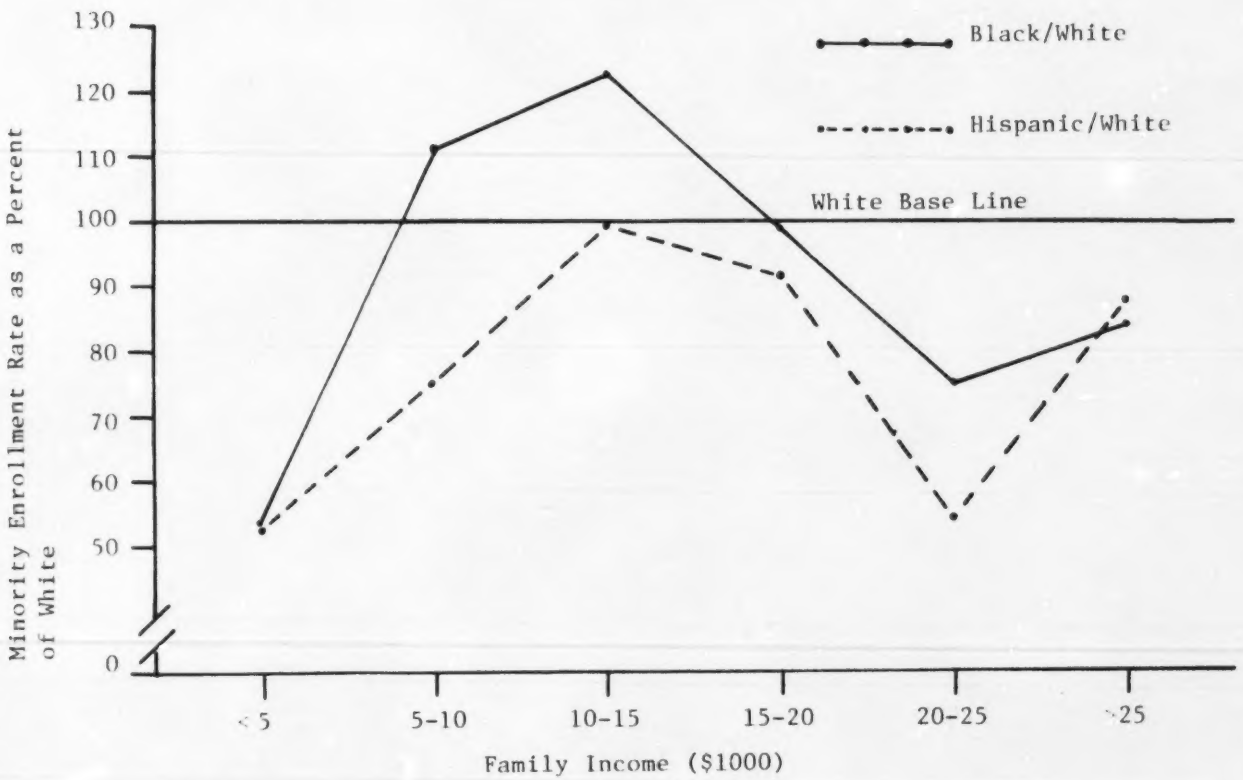
Figure 6.2 Minority-Majority Gaps in College Enrollment Rates for 1972 High School Graduates, by Tested Ability, Fall 1972



Source: Computations based on figures reported in Peng, 1977, Table 4.

The fact that at least part of this increase is due to financial aid is documented in Figure 6.3. Clearly, in 1976, Blacks with family incomes between 5 and 15 thousand dollars had higher enrollment rates than Whites, Hispanic or not. Given the still large achievement gap, at all income levels, these differentials must, at their base, be economic.

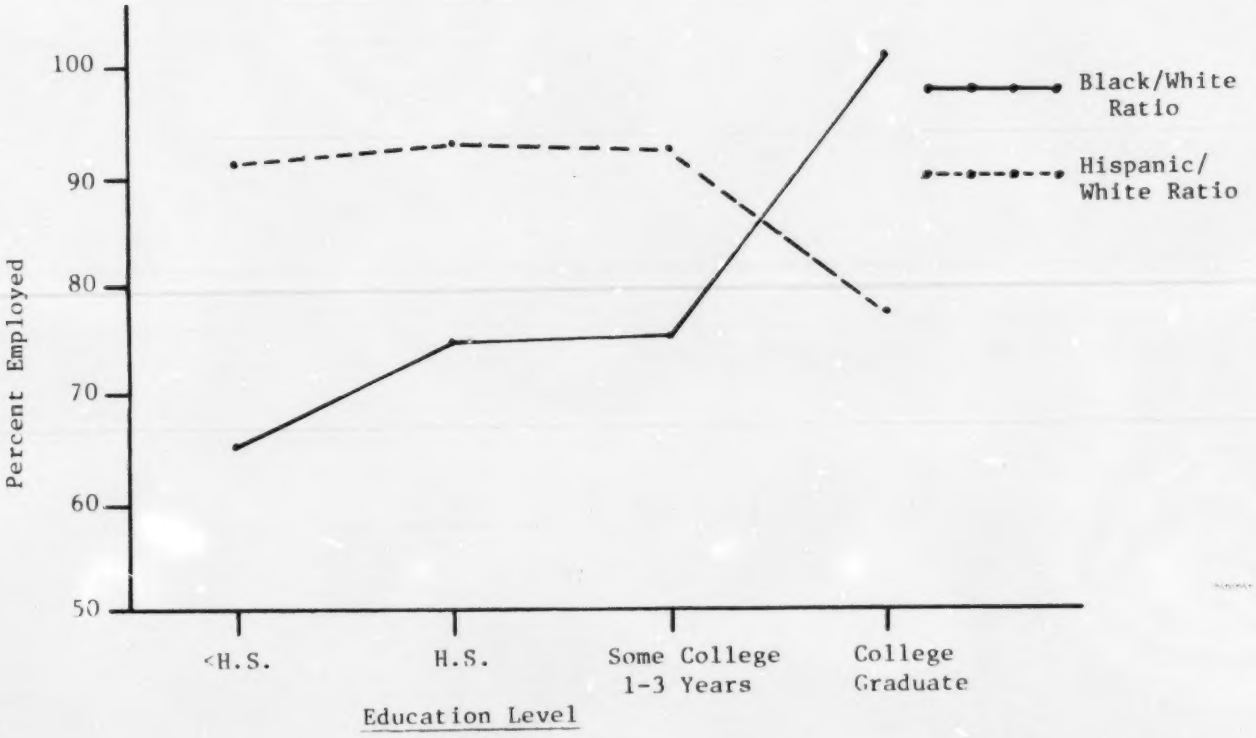
Figure 6.3 Minority-Majority Gaps in College Enrollment Rates, by Family Income, for Persons 18-24 Years Old, Spring 1976



Source: Computations based on figures reported in The Condition of Education 1978 Edition.

But what has happened to those who enter the labor market directly? Between 1960 and 1970 there was little change in ratios of unemployment rates of minority and White labor force participants. However, deterioration in the economic situation since 1970 has had a greater effect on minority than majority employment. For example, in 1960 the unemployment rate for Black males over 14 was 80 percent higher than that for Whites (8.6 vs. 4.7%), while by 1976 the gap had grown to 170 percent (15.9 vs. 5.9%). Similar shifts also occurred for Hispanics (U.S. Commission on Civil Rights, 1978). But how does education relate to gaps in employment? By 1976, there was a starkly strong positive relation for Blacks, and a weaker negative one for Hispanics (Figure 6.4).

Figure 6.4 Racial/Ethnic Ratios of Percent Employed Among Those 16 to 24 Years Old by Level of Education, October 1976

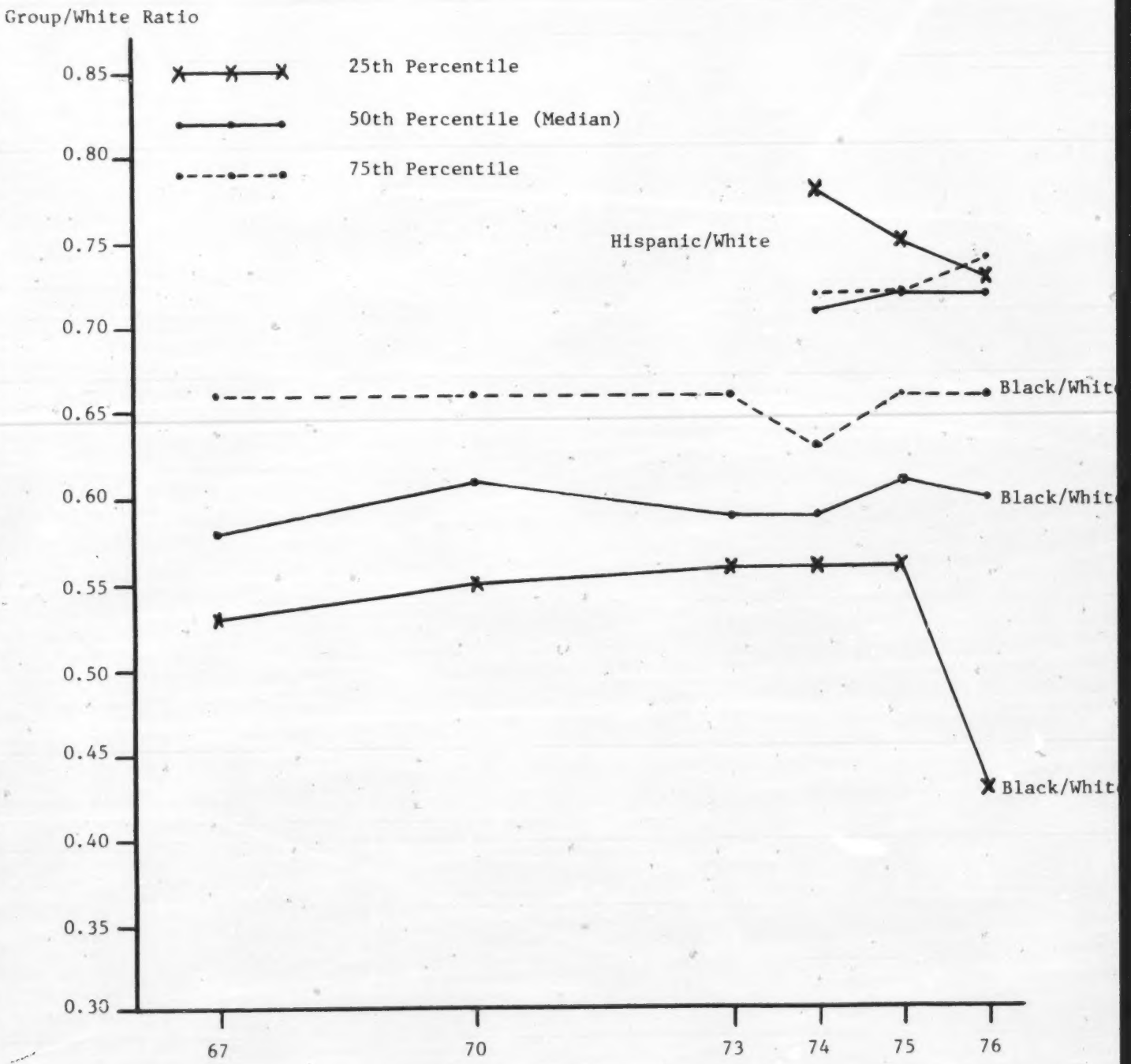


Source: Computations based on figures reported in The Conditions of Education, 1978 Edition, p. 14.

One intriguing fact displayed by the figure is that percent employed among Black college graduates exceeds that among similarly educated Whites. This a striking indicator of social class disparities among Blacks. Trends in income discrepancies, by education level, indicate that the current shape of some of these education-related effects may be of recent origin. From 1949 to 1959, for example, Black-White income ratios were inversely related to level of education (1950: high school dropouts 75%, high school graduates 69%, college graduates 58%). But by 1973 all of the ratios had converged to 77 percent (based on figures reported in Freeman, 1977). There is some reason to suppose that by 1976, such ratios had crossed over, creating a pattern similar to Figure 6.4. Figure 6.5 displays evidence for this conclusion.

While Black-White median ratios for the household income distribution have remained constant or increased, the ratio of incomes at the 25th percentile of the Black and White distributions fell dramatically between 1975 and 1976. While the ratio of incomes at the 75th percentile increased percentage one point between 1967 and 1976, the ratio at the 25th percentile decreased 10 percentage points. Thus, where the Black-White income gap is at its most extreme, the lowest end of the income spectrum, the disparity has recently increased. This exacerbates the class differential between middle and low-income Blacks, and suggests that achieving parity in median income between Blacks and Whites will not result in reduction of class differentials among Blacks. Indeed, it may even exaggerate them.

Figure 6.5 Black and Hispanic/White Income Ratios Defined at the 25th, 50th (median) and 75th Percentiles of Income Distributions, Households, 1967-1976



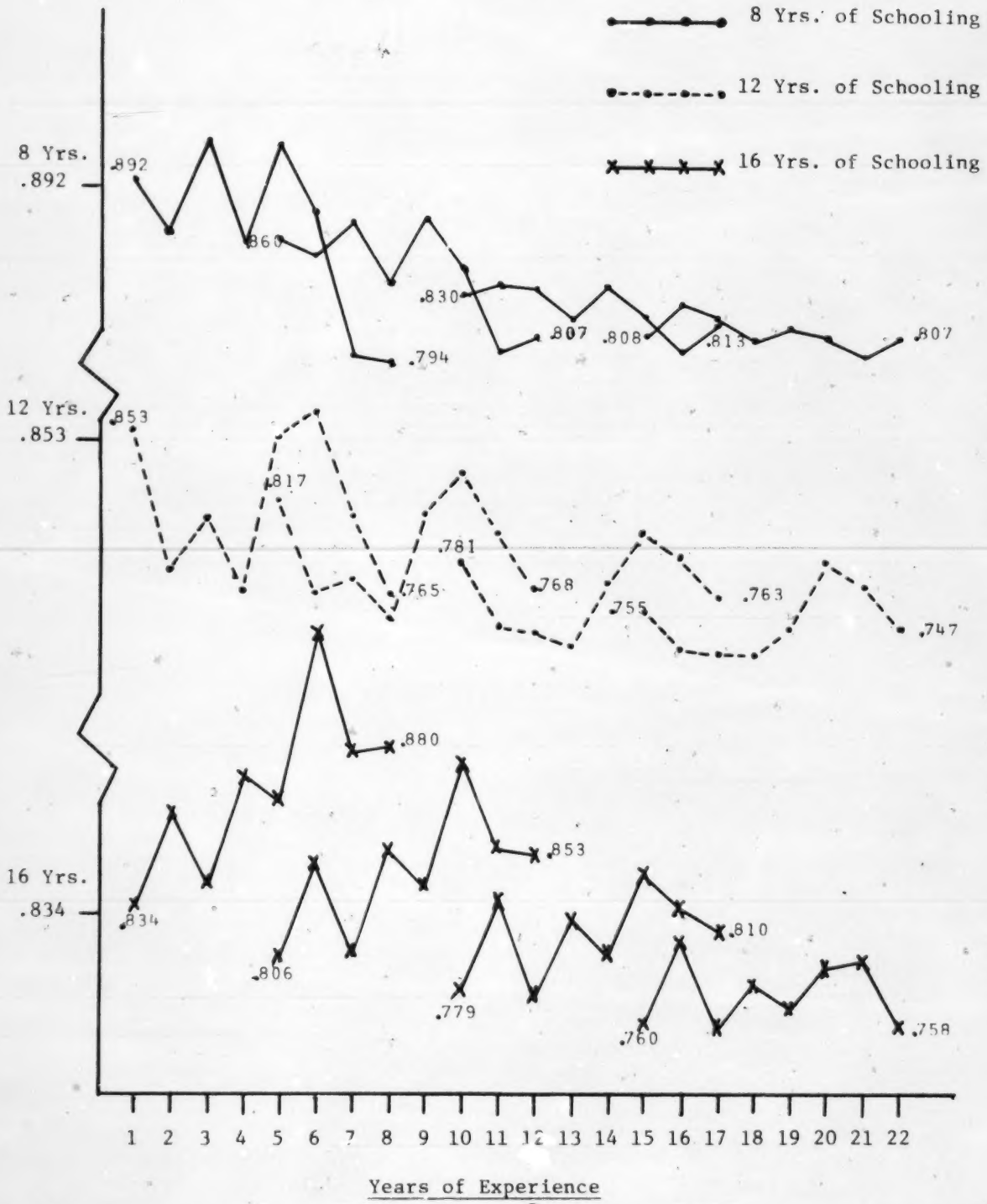
Source: Statistical Abstract of the United States, 1977.

Even narrowing of Black-White median income ratios for young Blacks is significant only if those gains are sustained throughout their occupational careers. There are two views to this controversial question: one is that Blacks have been relegated to "dead-end" jobs and that gains shown now will erode; the other that the younger Blacks hired differ so markedly from their predecessors in job-related skills that their gains will continue. The former has been termed the "life-cyle" view, while the latter is considered the "vintage" perspective.

Smith and Welch (1978) have analyzed data relating to this problem and conclude that the "vintage" view is the more correct. Figure 6.6 presents graphs of their data, reorganized by cohort, and plotted separately according to amount of schooling. Note that the figure permits us to compare current vs. lifetime income, the relationship between income and experience, and the various income ratios that accompany various educational levels. What is unique about Smith and Welch's data set is that one can trace any cohort group from 1967 through 1974, whereas most previous studies used only two data sets (versus eight successive cross-sections).

First, examining current vs. lifetime income for college graduates, we see that the ratio of Black-White wages is higher for recent entrants (left) than for older cohorts (right) at the same levels of experience. Also ratios increase with experience in the younger groups, but less steeply with increasing age. Looking at high school dropouts, we see no such cohort effects, ratios declining with years of experience. High school graduates are intermediate, exhibiting

Figure 6.6 Black-White Wage Ratios as a Function of Years of Experience for Three Levels of Amount of Schooling



Source: Smith and Welch, 1978.

Note: Each broken line traces one experience cohort through the eight year period, 1967-1974. Most recent (youngest) cohorts are to the left and the groups are separated by five year intervals.

smaller cohort effects than college graduates and no observable effects of experience within cohorts. These effects are, of course superimposed over strong effects of general economic conditions (e.g., 1972 was a year with uniformly high wage ratios). We also see that, on average, the ratios are highest for college graduates and elementary school graduates, but lower for high school graduates. This may be do to the fact that these years span the transition period in relation of educational level to wage ratio (see p. 272).

The overall conclusion that can be drawn from these data is that the "vintage" argument of permanent changes in skills seems to be supported for college graduates but that the "dead-end" job argument is valid for dropouts. This is another strong indicator of increasing social class differentiation among Blacks.

6.5 On the Whole...

When we began this report we asked six basic questions concerning the educational progress of minorities in the United States. We now return to these questions.

1. Are the differences in social and economic attainment of Blacks and Whites small for individuals with similar backgrounds? If so, how does that affect our view of the large remaining gap between typical individuals of each race and what does this imply for government policy?

These differences are now small for the younger college educated and for those with high status occupations, but these individuals remain a much smaller proportion of the Black than of the White population. Discrepancies for the less well educated, including those at the middle and lowest occupational levels

remain large and may be increasing. Because of the fact that much larger proportions of the Black than the White population are located at the lowest social and economic levels, this should increasingly direct policy concern to social class distinctions within racial groups rather than maintaining an undifferentiated focus solely on race.

2. What are the differences in resources available for the education of Black and White children and how has this changed?

Since the major expansion of federal support for education in the midsixties, total federal elementary-secondary education funds affecting minority pupils have increased, but only at about the rate of inflation. Exceptions to the general trend have occurred to some degree for Title I and especially for Handicapped Education. As a consequence, federal funds have decreased as a percent of total local district revenues.

As minorities generally are located in districts with low property values, as the preponderance of local revenues are still from local sources, and as local revenues have become increasingly disequalizing, districts with high concentrations of minorities are increasingly resource poor.

3. Has programmatic emphasis made a difference in the use of these resources?

4. What implications have financial and programmatic changes had for actual racial differences in educational experiences?

Preschool opportunity for 3- and 4-year-old Black children has been greatly enhanced over the past ten years, especially for those from lower class families because of Head Start and Title I preschool programs and for the growing upper middle class via tuition-based private nursery schools. Blacks start out in elementary school at younger ages than Whites but fall increasingly behind until, at age 16 they average 30 percent of a grade below their White age mates.

In early elementary grades, minorities are offered and receive less instruction in basic skills (reading, mathematics) than Whites, but by sixth grade the amount of such instruction, by then remedial, exceeds that for Whites. Thirty-five percent of Blacks, 44 percent of Hispanics and 21 percent of Whites receive compensatory education in elementary school, and about 60 percent of the total are supported by Title I. Title I selects, porportionately, many more Blacks than Whites for participation than other compensatory programs.

In 1960, there were large gaps between the secondary school services provided for Blacks and Whites. By 1965, amount of instruction offered, homework, and types of courses taken had reached parity. However, Blacks still encountered larger classes by 1965 and the discrepancy in percent assigned to academic tracks closed only 26 percent between 1960 and 1972.

5. What role have changes in the educational process played in achievement, school retention and advancement, post-secondary access and attainment, occupation, and income?

Majority-minority verbal achievement gaps in elementary school decreased about 10 percent between 1965 and 1972. The elementary mathematics gap fell about 5 percent over the same period. Black-White gaps in secondary school achievement declined in all areas between 1960 and 1965. Hispanic-White gaps increased dramatically over the same period. Little change was found in secondary achievement gaps between 1965 and 1972.

Minority children who were the recipients of increases in secondary school resources in the 1960's include those young adults whose additional schooling is now paying off in higher income relative to Whites. Minority children who were recipients of increases in elementary school resources in the 1960's include those high school graduates who are more likely to pursue additional education.

6. And in total impact, have government programs been effective in reducing the gaps between Black and White education?

The total picture seems to support a conclusion of increased "quality of education" for minority students. Federal programs have assisted this effort, especially in the South and in central cities. It is important to also consider what should have happened if federal programs were not existing. The high reliance on local funds for education would have resulted in considerably

higher revenue discrepancies than are presently existing.

Although we found, that federal programs contributed to the "quality of education" for minority students, there are two areas of concern, where federal programs might have adverse effects. One concerns the fact that Head Start Centers are indirectly supporting segregated preschooling and the other concerns is that after 25 years of desegregation, we were not able to detect clear positive effects.

References

Barnow, B.S. and Cain, G.G. — "A Reanalysis of the Effect of Head Start on Cognitive Development: Methodology and Empirical Findings," Journal of Human Resources, Vol. 12, No. 1, (Winter, 1977), p. 177-197.

Barr, R. — "How Children are Taught to Read: Grouping and Pacing," School Review Vol. 83, No. 3 (May, 1975), p.479-498.

Breglio, V.J.; Hinckley, R.H.; and Beal, R.S. — Report #2: Students' Economic and Educational Status and Selection for Compensatory Education. Santa Ana, CA: Decima Research, 1978.

Bronfenbrenner, Urie — Is Early Intervention Effective? A Report on Longitudinal Evaluations of Preschool Programs, Vols. I-II, DHEW Publication. Washington, D.C.: U.S. Government Printing Office, 1974.

Bronfenbrenner, Urie — The Next Generation of Americans. Paper from the 1975 Annual Meeting of the American Association of Advertising Agencies, Dorado, Puerto Rico, 1975.

Brown v. Board of Education of Topeka, 349 U.S. 294, 75 S. Ct. 753, 99 L. Ed. 1083 (1955)

Center for National Policy Review — Justice Delayed and Denied. Washington, D.C., 1974.

Coleman, J.S. et al. — Equality of Educational Opportunity. Washington, D.C.: U.S. Government Printing Office, 1966.

Coleman, J.S. et al. — "Recent Trends in School Integration." Paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C., April 2, 1975.

Congressional Budget Office — Inequalities in the Educational Experiences of Black and White Americans. Washington, D.C.: U.S. Government Printing Office, 1977.

Cook, Thomas D.; Appleton, Hilary; Conner, Ross F.; Shaffer, Ann; Tamkin, Gary; and Weber, Stephen J. — "Sesame Street" Revisited. New York: Russell Sage Foundation, 1975.

Coulson, J.E. et al. — The First Year of Emergency School Aid Act (ESAA) Implementation. Santa Monica, CA: System Development Corporation, 1975.

Crain, R.L. and Mahard, R.E. "School Racial Composition and Black College Attendance and Achievement Test Performance." Sociology of Education, Vol. 51, (April, 1978), p. 81-101.

Datta, Lois-ellin The Impact of the Westinghouse/Ohio Evaluation on the Development of Project Head Start: An Examination of the Immediate and Longer-Term Effects and How They Came About. Washington, D.C.: National Institute of Education,

Farley, R. "Trends in Racial Inequalities. Have the Gains of the 1960's Disappeared in the 1970's?" American Sociological Review, Vol. 42 (April, 1977), p. 189-208.

Fetters, W.B. National Longitudinal Study of the High School Class of 1972. Washington, D.C.: National Center for Education Statistics, 1975.

Freeman, R.B. Black Elite: the New Market for Highly Educated Black Americans. New York: McGraw - Hill, 1977.

Golladay, M.A. The Condition of Education 1975 Edition. Washington, DC: National Center for Education Statistics, 1975.

Golladay, M.A. The Condition of Education 1976 Edition. Washington, DC: National Center for Education Statistics, 1976.

Golladay, M.A. The Condition of Education 1977 Edition. Washington, DC: National Center for Education Statistics, 1977.

Golladay, M.A. and Noell, J. (Eds.) The Condition of Education 1978. Washington, D.C.: National Center for Education Statistics, 1978.

Goodlad, John I. et al. Early Schooling in the United States. New York: McGraw-Hill, 1975.

Gray, S.W. and Klaus, R.A. "An Experimental Preschool Program for Culturally-Deprived Children." Child Development, 1965, 36, p. 887-98.

Grant, W. Vance and Lind, C. George Digest of Education Statistics, 1976. Washington, D.C.: U.S. Government Printing Office, 1977.

Haertel, Edward H. and Wiley, David E. Achievement and Poverty as Title I Eligibility Criteria: Statistical Comparisons and Findings. Chicago: ML - GROUP for Policy Studies in Education, CEMREL, Inc., 1977.

Haertel, E.H. and Wiley, D.E. Social and Economic Differences in Elementary School Achievement. Chicago, Illinois: ML - GROUP for Policy Studies in Education, CEMREL, Inc., June 16, 1978.

Harnischfeger, A. and Wiley, D.E. — Achievement Test Score Decline: Do We Need to Worry? St. Louis: CEMREL, Inc., 1975.

Hauser, R.M. and Featherman, D.L. — Equality of Access to Schooling: Trends and Prospects. Working Paper 75-17 (n.d.)

Hauser, R.M. and Featherman, D.L. — "Equality of Schooling: Trends and Prospects." Sociology of Education 49 (April, 1976), p. 99-120.

Hinckley, R.H.; Beal, R.S.; and Breglio, V.J. — Students' Economic and Educational Status and Receipt of Educational Services. Sustaining Effects Study Technical Report No. 3, March 1978.

Hodgden, Laurel; Koetter, Judith; Laforse, Beverly; McCord, Sue; and Schramm, Daisy — School Before Six: A Diagnostic Approach, Revised Edition, Volume II. St. Louis, Missouri: CEMREL, Inc., 1974.

Keyserling, M.D. — Windows on Day Care. New York: National Council of Jewish Women, 1972.

Kirk, S.A. — Early Education of the Mentally Retarded. Urbana, Illinois: University of Illinois Press, 1958.

Lazar, Irving; Hubbell, Virginia Ruth; Murray, Harry; Rosche, Marilyn; and Royce, Jacqueline — The Persistence of Preschool Effects. Final Report (Grant No. 18-76-07843) to the Administration on Children, Youth and Families Office of Human Development Services. U.S. Department of Health, Education and Welfare; September, 1977.

Lazear, Edward — "The Narrowing of Black - White Wage Differentials Is Illusory." (draft) University of Chicago and National Bureau of Economic Research (February, 1978).

Loret, P.G.; Sesler, A.; Bianchini, J.C.; and Vale, C.A. — Anchor Test Study -- The Equating and Norming of Selected Reading Achievement Tests (Grades 4, 5, and 6). Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1974.

Mann, Ada Jo; Harrell, Adele; and Hurt, Maure Jr. — A Review of Head Start Research Since 1969. (Working Draft) Washington, D.C.: Social Research Group, The George Washington University, 1976.

Mielke, K.W.; Johnson, R.C.; and Cole, B.G. — The Federal Role in Funding Children's Television Programming, Volume I. U.S.O.E. Final Report. Bloomington, Indiana: Indiana University, 1975.

Montessori, Maria — The Secret of Childhood. New York: Ballantine Books, 1966.

National Academy of Sciences — Toward a National Policy for Children and Families. Washington, D.C., 1976.

National Assessment of Educational Progress — Science Achievement: Racial and Regional Trends, 1969-73. (Background Report No. BRS-1). Washington, D.C.: U.S. Government Printing Office, March, 1976.

National Center for Educational Statistics — Preprimary Enrollment Trends of Children Under Six, 1964-1968. Washington, D.C.: U.S. Government Printing Office, 1969.

National Center for Educational Statistics — Yearly Reports on Preprimary Enrollments -- 1964 - 1972 and 1974 - 1975. Washington, D.C.: U.S. Government Printing Office.

National Opinion Research Center (NORC) — Southern Schools. An Evaluation of the Effects of the Emergency School Assistance Program and of School Desegregation. (Vols I and II). Chicago: University of Chicago, 1973.

Norton, A.J. — "Methodological approach to longitudinally projecting the population of children born in 1977 who may be expected to spend some meaningful length of time in a single-parent situation before reaching the age of 18 -- and related discussion." Research Note. Population Division, U.S. Bureau of the Census, April 8, 1977.

Office of Management and Budget — Social Indicators, 1973. Washington, D.C.: U.S. Government Printing Office, 1973.

Office of Technology Assessment (OTA) — A Preliminary Analysis of Demographic Trends Influencing the Elementary and Secondary School System. Report prepared for the U.S. Congress, May, 1977.

Orfield, G. — Must We Bus? Washington, D.C.: The Brookings Institution, 1978.

Peng, S.S.	"Trends in The Entry to Higher Education: 1961-1972," Educational Researcher, 6, p. 15-18.
Peng, S.S. et al.	National Longitudinal Study of the High School Class of 1972. Research Triangle Park, North Carolina: Center for Educational Research and Evaluation, May, 1977. (Other NLS Studies may be referenced through this document.)
	Profiles of Children. 1970 White House Conference on Children. Washington, D.C.: U.S. Government Printing Office.
Pettigrew. T.F. and Green, R.L.	"School Desegregation in Large Cities: A Critique of the Coleman 'White Flight' Thesis." Harvard Educational Review 46, 1, 1976, p. 1-53.
Quillian, B.F. Jr. and Rogers, K.S.	Nine Model Programs for Young Children: Program Summaries for Potential Implementation, Volumes I and II. St. Louis, Missouri: CEMREL, Inc., 1972.
Ravitch, Diane	"The 'White Flight' Controversy", The Public Interest, 51, (Spring, 1978), pp. 135-
Rossell, Christine	"School Desegregation and White Flight," Political Science Quarterly, 90, (Winter 1975-76), p.675-695.
St. John, Nancy H.	School Desegregation: Outcomes for Children, New York: John Wiley & Sons, Inc., 1975.
Smith, J.K.	Teacher Planning for Instruction. Studies for Educative Processes No. 12. Chicago: ML-GROUP for Policy Studies in Education, CEMREL, Inc., 1977.
Smith, James P. and Welch, Finis	Race Differences in Earnings: A Survey and New Evidence. Santa Monica, CA: Rand Corporation, 1978.
Smith, James P.	The Convergence to Racial Equality in Women's Wages. Santa Monica, CA: Rand Corporation, 1978.
Snapper, Kurt J. and Ohms, JoAnne S.	The Status of Children 1977. U.S. Department of Health, Education, and Welfare, (n.d.)
	Status: A Monthly Chartbook of Scoial and Economic Trends. Washington, D.C.: October, 1976.

Steinfels, M.O. — Who's Minding the Children? New York: Simon and Schuster, 1973.

U.S. Bureau of the Census — Characteristics of the Low - Income Population, 1973; Washington, D.C.: 1973.

U.S. Bureau of the Census — Current Population Reports, Series P-20, No. 319, "School Enrollment - Social and Economic Characteristics of Students: October 1976" Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Bureau of the Census — "Household and Families, by Type: March 1976." Current Population Reports, Series P-20, No. 296, Washington, D.C.: 1976.

U.S. Bureau of the Census — Money Income and Poverty Status of Families and Persons in the U.S., 1974. Washington D.C.: 1974.

U.S. Bureau of the Census — Nursery School and Kindergarten Enrollment: October 1973. Population Characteristics. Washington, D.C.: U.S. Government Printing Office, 1974.

U.S. Bureau of the Census — Nursery School and Kindergarten Enrollment of Children and Labor Force Status of Their Mothers: October 1967 to October 1976. Population Characteristics. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Bureau of the Census — Social Indicators, 1976. Washington, D.C.: U.S. Government Printing Office, 1977.

U.S. Bureau of the Census — Statistical Abstract of the United States: 1976. (97th edition) Washington, D.C.: 1976.

U.S. Bureau of the Census — Statistical Abstract of the United States: 1977 (98th edition). Washington, D.C.: 1977.

U.S. Commission on Civil Rights — Social Indicators of Equality for Minorities and Women. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Congress -- Office of Technology Assessment	A Preliminary Analysis of Demographic Trends Influencing the Elementary and Secondary School System, Appendix, May, 1977.
U.S. Department of Commerce	Nursery School and Kindergarten Enrollment: October 1973. Population Characteristics. Washington, D.C.: 1974.
U.S. Government Printing Office	Nursery School and Kindergarten Enrollment of Children and Labor Force Status of Their Mothers: October 1967 to October 1976. Population Characteristics. Washington, D.C.: 1978.
U.S. Government Printing Office	Preprimary Enrollment Trends of Children Under Six, 1964-1968. National Center for Educational Statistics. Washington, D.C.: 1969.
U.S. Government Printing Office	Profiles of Children. 1970 White House Conference on Children. Washington, D.C.
U.S. Government Printing Office	Status: A Monthly Chartbook of Social and Economic Trends. Washington, D.C.: October, 1976.
U.S. Office of Education	Annual Evaluation Report on Programs Administered by the U.S. Office of Education, Fiscal Year 1976. Washington, D.C.: 1976.
U.S. Senate Committee on Finance	Child Care, Washington, D.C.: U.S. Government Printing Office, 1974.
Wagner, A.P. and Rice, L.D.	"Student Financial Aid: Institutional Packaging and Family Expenditures Patterns." NCES (unpublished) (n.d.)
Weikart, D.P.; Kamii, C.K.; and Radin, N.	Perry Preschool Progress Report. Ypsilanti, Michigan: Ypsilanti Public Schools, 1964.
Weinberg, Meyer	A Chance to Learn. New York: Cambridge University Press, 1977.

Westinghouse Learning Corporation and Westat Research, Inc. Day Care Survey 1970-71. Child Care Bulletin No. 7. Washington, D.C.: The Day Care and Child Development Council of America, Inc., 1971.

Wiley, D. E. Some remarks on the Analysis of Contextual Effects in Education. Annual Meeting of the American Educational Research Association, Washington, DC, 1975.